FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

Volume 28—Number 39 | SEPTEMBER 29, 1956 | 1 Year $4, 2 Years $7

Molasses Market Tightens While Needs Increase

One of the tightest markets for molasses in recent years had rather perplexed feed ingredient buyers searching for supplies to keep mill operations on schedule this week. Unfortunately for the feed trade, the sharp advance in recent weeks has come at a time when molasses needs are greater due to an upturn in demand for cattle feeds for the fall and winter season.

A divergence of opinion on current values of molasses among the suppliers adds to the present confusion of the market. Latest quotations from a majority of the suppliers place molasses at better than 20¢ gal., New Orleans, for immediate shipment, while other sources are holding fast to a 18-18½¢ level. Most sales, even for immediate shipment, are strictly subject to confirmation and obtaining even an October quotation is near an impossibility. Suppliers report current demand heavy and interest especially good for the October - November - December position, a proposition which nearly all molasses firms are shying away from.

(Continued on page 77)

Upturn in Hog Output Cycle Foreseen

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — It appears that the bottom of the hog production cycle is not far off and that the beginning of an upturn in numbers may show up in the 1957 spring pig crop period.

These indications came from experts in U.S. Department of Agriculture circles as they commented on the new quarterly pig crop report issued this week. (See accompanying story for details on the report covering nine Corn Belt states.)

Following reductions in the 1956 pig crops, the spring pig crop may mark the turn of the production cycle. For the spring crop, it looks as though it is nip and tuck between a fractional decrease from a year earlier or a slight increase over the 1956 crop.

• • •

Price Support Possible

In connection with the outlook on swine numbers, it is interesting to note that information reaching this reporter in several forms indicates that USDA stands ready to step into the hog market to prevent a price break below $14.50 cwt. (average) when hogs go into marketing peaks this fall.

This week Ezra Taft Benson, secretary of agriculture, said that he would view with alarm a break in hog prices below that level. It has been observed that when a top official makes such a comment, it is, in effect, a commitment that his agency is ready to take action.

In other USDA quarters, officials estimate that the hog price will probably hold, on an average, at about $14.50 lows and that nothing like the "bust" of last year will recur in 1956.

Meanwhile, the new pig crop report indicates to informed observers here that the bottom of the hog production cycle is just about reached and that there could even be a slight increase over 1956 in the 1957 spring pig crop after the intervening declines.

On the basis of farmers' present intentions, the report shows that for

(Continued on page 77)

Fall Pig Crop Decrease of About 8% Now Indicated

WASHINGTON—A U.S. Department of Agriculture report this week provided a further indication of the current reduction in swine production and the prospects for hog prices better than a year ago.

The report shows that the expected number of sows to farrow in the fall of 1956 (June 1-Dec. 1) for nine Corn Belt states is 8% smaller than in 1955. The total is not far from the fall farrowing intentions reported by farmers last June.

Following up the fall pig crop decrease, it appears, will be a further over-all decrease from a year earlier in the number of sows farrowing in the first part of the 1957 spring pig crop period. However, the percentage decrease will not be so large as that for the fall pig crop, and the intentions reports for this period also indicate considerable variation among different states.

Number Farrowing

The total number of sows indicated to farrow in the 1956 fall period is now estimated at 3,490,000 head for the nine states covered in the special pig crop report. This compares with 3,781,000 sows farrowed in the same period of 1955.

The nine states are Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, South Dakota and Kansas. These states accounted for 68% of the U.S. fall pig crop in 1955. In

(Continued on page 77)

USDA Decision Expected On Soybean Price Question

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — The Commodity Credit Corp. board of directors failed to agree late this week to announce a firm re-sale policy on soybeans which may be taken over under loan defaults on May 31, 1957. Objections from the board center around the advisability of making such a long-term commitment. The final decision has been postponed until next week when the Secretary of Agriculture himself will be asked to rule on the issue.

The failure to reach a decision was regarded as unfortunate since many soybean processors were prepared to start intensive buying this weekend, particularly if they had assurance of a firm sales policy of USDA next summer.

The U.S. Department of Agriculture has been expected to announce that it will price beans taken over under loan commitments next May 31, for all sales, at the support price for the crop plus carrying charges. Soybeans, as with other oilseed crops, are not subject to any statutory formula pricing for re-sale by the government.

Would End Problem

Such a decision, probably to be announced next week, would seem to resolve the controversial problem of government plans for the big soybean crop.

The American Farm Bureau Federation urged inclusion of soybeans under provision of Public Law 480, for export sale for soft foreign currencies. The next proposal was one from the processing industry suggesting that USDA buy soybean oil at 12¢ lb.

At the last session with industry, and with the Farm Bureau proposal at hand, USDA stood firm against such propositions and insisted that the prospective soy oil procurement authorizations under P.L. 480 would back up the soybean price and hold it, except for a peak marketing period at time of harvest, at not less than the price support level.

(Continued on page 77)

USDA Egg Buying Program May Take 500,000 Cases

WASHINGTON—The U.S. Department of Agriculture has money available under the school lunch program to purchase not less than 500,000 cases of shell eggs in the recently announced diversion program for that commodity.

It is expected that this buying power will be telescoped into the next seven or eight weeks.

Information from USDA indicates that for the school lunch program, it can absorb eggs at a rate of 200,000 cases a month and that the public institution program will take about 100,000 cases monthly.

First tenders of shell eggs for the government program were due here this past week, and there was no information as to the cut-off point where USDA will decline tenders. However, this is no new technique. In the past, tenders at the opening of a program have been testing offers, with the trade waiting for the government to reveal its hand. Subsequently, having felt the environment, the trade has moved vigorously to nail down business.

While it wasn't stated positively, USDA officials told Feedstuffs that it is likely that the 500,000 case purchase limit may be telescoped into the next seven weeks since the delivery date can be spread into the school lunch program through late November and early December.

There are no indications that the 500,000 case purchase total will be increased. It is hoped that this sizeable procurement by USDA will be a stopper on any drastic price declines within the next seven weeks, after which normal trends will take hold and firm up the market.

FEEDSTUFFS *Features This Week*

HANDLING FATS: The first in a series of articles on handling, mixing and other aspects of the use of animal fats in feeds appears on **page 28**. This article, by R. W. MacGregor, deals with purposes and levels of fat in various types of feeds.

AMINO ACID REQUIREMENTS: A general method of calculating amino acid requirements of the broiler is described by Dr. R. S. Gordon and Dr. K. H. Maddy on **page 38**.

MEDICATED FEEDS: A Food and Drug Administration official explains on **page 44** how medicated feeds come under federal law, and he outlines some of the control and manufacturing problems with these feeds.

MARKETING SYSTEM: The fact that the government is today's biggest threat to the private agricultural marketing system is pointed out by Ezra Taft Benson, secretary of agriculture, on **page 17**.

BUILDING SALES: A southwest firm's four-point plan for building sales is explained on **page 75**.

Joe Brooks	32	Worth Looking Into	70
Up or Down	58	Putting Research to Work	72
Convention Calendar	60	Classified Ads	74
Feed Service Bulletin Board	65	Feed Markets in Detail	78
Camera Views	68	Index of Advertisers	83

★ FEEDSTUFFS ★

A Weekly Newspaper Published by
THE MILLER PUBLISHING CO.
2501 WAYZATA BLVD., MINNEAPOLIS, MINN.
(Address Mail to P. O. Box 67, Minneapolis 1, Minn.)
(Telephone: Federal 2-0575. All Offices Serviced by Bell System Teletype)

EDITORIAL STAFF—Harvey E. Yantis, Editor; George L. Gates, Managing Editor; Roger Berglund, Assistant Managing Editor; John Cipperly, Washington Correspondent; Emmet J. Hoffman, Merchandising Editor; Thomas E. Letch, Assistant Editor; Walter C. Smith, Research Director.

WASHINGTON CORRESPONDENT—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 7-8534.

ADVERTISING STAFF—Wilfred E. Lingren, Advertising Director; Carl R. Vetter, Advertising Production Manager; Bruce A. Kirkpatrick, Assistant Advertising Production Manager.

BUSINESS STAFF—Carroll K. Michener, Chairman of the Board of Directors; Harvey E. Yantis, President; Milton B. Kihlstrum, Executive Vice President and Treasurer; Martin E. Newell, Vice President; Don E. Rogers, Vice President; Wilfred E. Lingren, Secretary; Thomas A. Griffin, Business Manager; Edwin J. Hartwick, Circulation Manager; James G. Pattridge, Assistant Treasurer; Richard L. Ostlund, Office Manager; W. O. Buchkosky, Production Superintendent.

BRANCH OFFICES—SOUTHWEST, Martin E. Newell, Manager; James W. Miller, Assistant Manager, 612 Board of Trade Bldg., 1005 Wyandotte St., Kansas City 5, Mo. (Tel. Victor 2-1350); EASTERN STATES, Paul L. Dittemore, Eastern Advertising Sales Manager; George W. Potts, New York Office Manager, Suite 3214, 551 Fifth Ave., New York 17, N. Y. (Tel. Murray Hill 2-2185); CENTRAL STATES, Don E. Rogers, Manager; Henry S. French, Assistant Manager, 2272 Board of Trade Bldg., 141 W. Jackson Blvd., Chicago 4, Ill. (Tel. Harrison 7-6782); NORTHWEST, Paul A. Anderson, Advertising Sales Representative, P. O. Box 67, Minneapolis 1, Minn. (Tel. Federal 2-0575).

Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager, Feedstuffs, Box 67, Minneapolis 1, Minn. Single copies 20¢. Subscription rates: One year $4, two years $7, in the U.S., U.S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Readers are urged to give prompt notice of change of address and to anticipate future changes by at least two weeks' advance notice. Ask postman for form 22-8. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized. Associated publications: The Northwestern Miller, The American Baker, Milling Production, Croplife.

Entered as second-class matter Feb. 25, 1947, at the post office at Minneapolis, Minn., under the Act of Mar. 3, 1879

The controlled circulation of this issue is concentrated in the southwestern states

Vertically Up, or Down?

A SUBJECT of wide interest and immediate as well as increasing importance is vertical integration in the broiler industry. Complete vertical integration simply means that all phases of broiler production would be under the control of one source—a feed manufacturer, for instance, or a processor of broilers for the market. Theoretically, such centralized control would eliminate wide fluctuations in the supply and demand situation and would modify some of the severe losses that have been experienced from time to time in broiler financing.

Most of the vertical integration developed so far has been partial rather than complete—a hatchery and feed dealer integration, a hatchery-hatching egg supply flock integration, or a feed dealer-grower integration. There are evidences, however, of a trend to more complete vertical organization of broiler production. Certainly, the subject is being given much attention by industry leaders.

In the Sept. 15 issue of Feedstuffs, advantages and disadvantages of vertical integration in the broiler industry were discussed by Dr. Charles K. Laurent, chairman of the poultry department at the University of Georgia. His article was the text of a talk he gave at the recent National Broiler Assn. convention.

In response to this article (which actually made no recommendations), a prominent feed manufacturer of wide experience has written his own analysis of the movement. He wishes to remain anonymous, but his informed appraisal is of interest to Feedstuffs' readers, and we are glad to present it herewith. The editors will welcome further discussion.

★ ★ ★

THE article in the Sept. 15 issue of Feedstuffs on vertical integration in the broiler industry is one of many that has appeared lately and, in my opinion, is missing the point," the manufacturer writes. "The real question is, which way does the integration move, vertically upward or vertically downward? Reference is made to the vertical integration that has occurred in the motor car industry and in other manufacturing businesses, which is quite proper, but did the accessory manufacturer or the body maker start making cars or did the car maker start making car bodies and many accessories?

"What's the purpose of integration in the long run? Is it to make a profit or simply to capture business which may or may not be profitable? In my opinion, sound integration must start with the consumer's immediate supplier and not the feed manufacturer. The consumer more and more is satisfying his needs on the basis of labeled merchandise. The housewife today wouldn't think of buying a can of tomatoes, a pound of butter, or a package of frozen spinach without a label and one with which she is familiar. When she goes to the super market to buy a pound of bacon, she likes to see a dependable label on the package. It is only reasonable to assume that the day will come when Mrs. Homemaker will always want a tag on that ice-packed broiler just the same as other food that she buys for her family. When that consumer preference is well established, the company that controls the consumer franchise is the point of integration, in my opinion, in the broiler industry.

"When Joe Diamond's frozen broilers or Wolfe's Deluxe ice-packed broilers are clearly preferred by the homemaker over unlabeled goods, then the Joe Diamonds and the Wolfe people are going to have to determine how they can protect the supply, the quality and the uniformity to satisfy Mrs. Homemaker. At first they may operate only their processing plants. If they find that the supply is erratic and their plants are not able to operate on an efficient, orderly basis, they may take steps to insure adequacy of supply. Similarly, if they find their broilers are not running uniform in size, lack pigmentation, or are in any other way short in quality aspects, they may enter into arrangements direct or indirect to give them what they want. Consideration of these arrangements could mean a guarantee of a market minimum price or actual assumption of the growing risk itself. It could also be that being large users or buyers of formula feed and chicks, they would go down a step further vertically and attempt to manufacture their own feed or to hatch their own chicks. There is no limit how far down the vertical ladder they may go so long as it is able to give them the best values for their purchasing dollars. To get too far away from their primary business invites the risks of inefficiency, poor feeds, poor chicks, and other items that are, as they should be, made by people who must be alert to the latest improvements in their particular industry.

"This is the direction of integration which, in my opinion, is the only sound approach there can be to the broiler industry. Upward integration, that is, the feed manufacturer or the hatcheryman attempting to control each step of production through to the chicken, is one that is going to lead to financial ruin because it is economically unsound. It is unsound for many reasons, the principal one of which is that the feed manufacturer who controls the production of chickens is selling on a common market for which no premium whatsoever will be paid; he is assuming a risk of whether there will be a market or not, and if there is a market, what it will be in relation to his costs. Controlling no consumer franchise, he, therefore, has nothing to sell but just 'plain chicken' instead of his branded feed. He is, in other words, in pure competition.

"There are, of course, other aspects of integration that are objectionable, such as chronic over-production, making growers in effect employees, which ultimately will assume a guarantee of an adequate living standard, and so forth. But these objections are somewhat in the nature of side issues which will be harmful in the long run even though not always immediately felt.

"It seems to me that all of us in the feed manufacturing business had better realize that 'buying' sales of feed through broiler growing arrangements is not economically sound because we are not in a position to adequately merchandise the end product, that is, the ice-packed or the frozen broiler itself."

★ ★ ★

Quote

FROM a talk by Dr. Wayne H. Riser before the American Pet Food Division of the AFMA: "The average dog weighs 40 lb. and needs 1,200 calories a day, but eats 1,500 calories. Therefore, a dog eats over half the calories a human being consumes. Since there are 25 million dogs and 166 million human beings in the country, our dogs are about one seventh the size of the human population and since each dog eats half as much food as a man, dogs eat one fourteenth as much food as the human population.

"On this basis our dogs consume as much food as is grown in all the New England states, New York, Pennsylvania, Delaware, New Jersey and Maryland. The American farmer has never considered the dog an asset to his economy but with no dogs to feed, Secretary Benson would have an additional $2 billion of food surplus to worry about each year."

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

Feed business was making a satisfactory improvement in a number of areas this week in line with anticipated fall developments, but elsewhere no appreciable change in the recent level of business was noted. More dairy and cattle feed is needed now, and stepped up sales of these feeds helped build volume for some mills. Drouth conditions hindered trade in the Southwest, although shipments of emergency rations were helping to keep some mills running on fairly good schedules. Ingredients were mostly firmer this week, and some feed men felt this would tend to encourage a better rate of purchase. Molasses was sharply stronger, and alfalfa meal was firm at recent higher levels. Soybean meal also tended to be stronger, along with the animal proteins. The index of wholesale feedstuffs prices was up slightly to 78.9 and the feed grain index was off about 3 points to 81.5 in the week ending Sept. 26. (Ingredient details on pages 78-80.)

Southwest

A continuation of drouth conditions over much of the Southwest kept formula feed demand from making any improvement this week. While an interest in drouth emergency feeds was apparent at interior points, the terminal mills either by choice or due to location were not sharing in any appreciable volume of that business. October-December cattle feed bookings which normally take place at this time of the year were slow to develop. Some mills reported a scattering of this type of business, but the volume was far below par. Uncertainty over the location of cattle numbers due to the drouth was an underlying factor.

A major part of the current volume of sales is turkey feed, while failure of the broiler market to show any improvement has kept broiler feed demand from making any headway. Hog feed sales were fair and in some instances comparatively good. Laying feed demand was rather good, while dairy cattle feed sales were holding about steady.

Generally mills found little or no reason to operate beyond a normal five-day week this week, with indications for production next week rather uncertain. Prices tend toward the firm side due to strong markets in vegetable and animal protein ingredients and sharply higher prices on molasses and alfalfa. On the other hand, grain and carbohydrate values have held the total formula costs from requiring more than a 50¢@$1 ton advance.

Northwest

A somewhat better tone in formula feed business was reported in the Northwest this week as demand for seasonal items improved and a firmer trend in ingredient prices gave dealers more confidence in the matter of building up floor stocks.

Dairy feed volume continued to expand, and beef cattle feed also was showing signs of improvement. More cattle are being moved into area feed lots.

Sales of laying feeds were steady, with improved business in this line anticipated as colder weather approaches. Strengthening of egg prices was expected as a result of the government's buying program, and this also could encourage better sales of feed.

More confidence is being expressed

(Continued on page 82)

Great Lady

This great lady is truly representative of an outstanding breed in the dairy industry. The Holstein's fine characteristics come from years of careful selection and breeding—with exacting care in feeding.

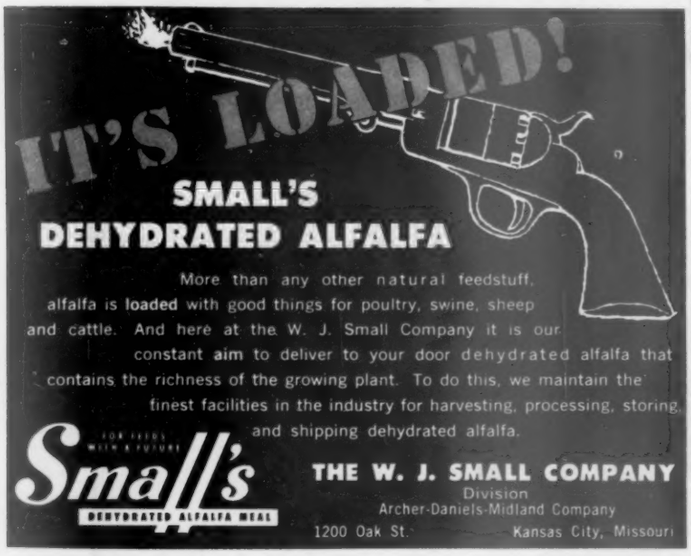
Yes, this great lady—the Holstein—is a living tribute to the creative research accomplished through the cooperation of colleges, dairymen, and private industry throughout America. Agri-Tech is sincerely proud of its part in advancing this program through supplying better feed ingredients for a healthier animal agriculture.

So it is with further pride that Agri-Tech sponsors "Operation Milkpail" for the dairy industry. One more step in a constant program of bringing higher production, at lower cost, to farmers everywhere.

Agri-Tech, Inc.

BOARD OF TRADE BUILDING KANSAS CITY, MISSOURI

TECHNICAL AGRICULTURAL PRODUCTS WITH CONTROLLED SPECIFICATIONS


IT'S LOADED!
SMALL'S
DEHYDRATED ALFALFA
More than any other natural feedstuff, alfalfa is loaded with good things for poultry, swine, sheep and cattle. And here at the W. J. Small Company it is our constant aim to deliver to your door dehydrated alfalfa that contains the richness of the growing plant. To do this, we maintain the finest facilities in the industry for harvesting, processing, storing and shipping dehydrated alfalfa.
Small's
DEHYDRATED ALFALFA MEAL
THE W. J. SMALL COMPANY
Division
Archer-Daniels-Midland Company
1200 Oak St. Kansas City, Missouri

Dr. Paul Harwood Reports on New Nitrofuran Mixture

ASHLAND, OHIO—Dr. Paul Harwood reported recently on the results of research on the use of a mixture of two nitrofuran drugs (nitrofurazone and furazolidone) in protecting broilers against coccidiosis.

Dr. Harwood, director of research for Hess & Clark, Inc., Ashland, Ohio, presented the report at the annual meeting of the American Institute of Bio'ogical Sciences at the University of Connecticut.

Dr. Harwood said it was shown that the mixture protects broilers against coccidiosis and mixed secondary infections. Also, it was stated in a Hess & Clark announcement, "birds receiving the mixture continuously are able to return their raisers an average of 2 to 3¢ more profit per bird than birds receiving other coccidiostats.

"Birds receiving the nitrofurazone and furazolidone mixtures are able to reach a weight of 3 lb. on ½ lb. less feed."

(Continued on page 81)

Whitney Eastman

Whitney Eastman Named to Board of Honeymead Products

MANKATO, MINN. — Whitney Eastman was elected to the board of directors of Honeymead Products Co. at a special board meeting recently.

One of the early pioneers in the soybean industry, he organized the National Soybean Processors Assn. in 1930 and served as president of that organization for many years. He was one of the first in industry to recognize the advantages of solvent processing of soybeans.

A graduate of Dartmouth College, Mr. Eastman started in the vegetable oil seed business in 1911 and became associated with Archer-Daniels-Midland Co. in 1928, serving as vice president and director until 1942. From then until his retirement in 1955 he was a vice president of General Mills, Inc., in charge of its chemical division and later its feed division.

Mr. Eastman has long been active in Boy Scout work and is a member of the National executive board of the organization.

Other members of the Honeymead board of directors are: D. O. Andreas, S. H. Maslon, L. W. Andreas, J. I. Maslon and G. A. Andreas. The officers are: D. O. Andreas, chairman; L. W. Andreas, president and treasurer; J. I. Maslon, vice president and secretary; W. B. Cox, vice president, and H. Groh, assistant secretary and treasurer.

Honeymead has what is reported to be the largest single soybean extraction unit in operation in the industry and is in the process of constructing a complete refinery. It distributes a wide variety of soybean products in international as well as domestic trade.

Nutrition Seminar Scheduled Oct. 16

ST. PAUL—The first Twin City Nutrition Seminar of the current season will feature discussions of ruminant studies, it has been announced by Robert E. Ahlin, Doughboy Industries, Inc., program chairman. The seminar will meet at the University of Minnesota on Oct. 16.

The speakers will be: O. E. Kolari, "Observations on Artificial Rumen Experiments"; J. B. Williams, "Additives and Supplements in Dairy Feeding"; A. L. Harvey, "Report on Rosemount Experiments on Beef Cattle Feeding," and Whitney Lindwall, "Discussions on Beef Carcass Grades."

MANEY BROS.
MILL & ELEV. CO.
Minneapolis, Minnesota
Distributors in the Upper Midwest States for
SMALL'S DEHYDRATED ALFALFA MEAL

It pays to DISPLAY
PILOT BRAND
OYSTER SHELL

PURE CRUSHED
TRIPLE SCREENED
OYSTER SHELL
PILOT BRAND OYSTER SHELL
FOR POULTRY
OYSTER SHELL PRODUCTS CORP.
NEW ROCHELLE, N. Y. ST. LOUIS, MO.

Featured on 70 outstanding Radio Stations and in leading Farm and Poultry Journals. PILOT BRAND Oyster Shell has been Nationally Advertised for over 30 years.

Through this consistent publicity, your customers know all about PILOT BRAND. They know of its superior, dependable quality—its pure, clean, 100% usability—its low cost per usable pound. They're told to "Look for the Bag with the Big Blue Pilot Wheel".

Cash in on this universal customer-acceptance. Always stock PILOT BRAND Oyster Shell. And keep a couple of bags of PILOT BRAND prominently displayed in your store. That's the way to get your full share of the profitable year-'round PILOT BRAND business.

ORDER FROM YOUR DISTRIBUTOR—OR WRITE TO US

FOR POULTRY
PILOT BRAND OYSTER SHELL
Oyster Shell Products Corp.
New Rochelle, N. Y. St. Louis 9, Mo.

announcing

vanco* A

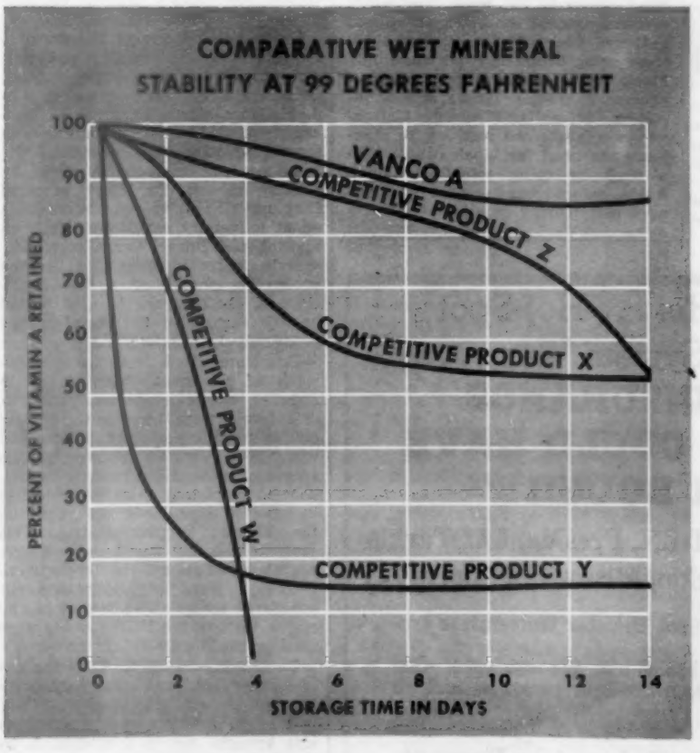
the ALL NEW DRY VITAMIN A

Unequalled for...

STABILITY ...even with high moisture, minerals, and in pelleting.

AVAILABILITY ...rapidly and completely utilized.

MICRO-UNIFORMITY ...allows complete, accurate distribution in feeds.



Each million units of Vitamin A is evenly distributed in 20,000,000 uniform beads of VANCO A...40 times as many as in other leading brands.

STABILITY RESULTS

Wet Mineral Stability Test

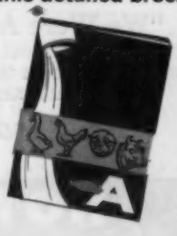
The most rugged stability test for dry Vitamin A is to subject it to a high concentration of trace minerals, extreme temperature and high content of moisture . . . conditions much more severe than those normally encountered in feed manufacturing.

Such experiments were set up to test VANCO A against several other commercially available dry Vitamin A products.

VANCO A was unequalled for stability, as shown in the accompanying chart.

Available in convenient low potencies, in the economical 75,000 unit product, and in water dispersible form. Write today for a free sample and this detailed brochure.

*Patents applied for



VAN CAMP LABORATORIES

Division of VAN CAMP SEA FOOD COMPANY, INC., Terminal Island, Calif.

Paul A. Anderson

Walter C. Smith

Feedstuffs Names Sales Representative, Research Director

MINNEAPOLIS—A new sales representative and a new research director of Feedstuffs are among several appointments announced this week by Harvey E. Yantis, president of the Miller Publishing Co., publisher of Feedstuffs and four other business papers.

Walter C. Smith, who joined the company as an editorial assistant in its New York office in July, 1954, was named director of research. He recently was transferred to the home office at Minneapolis.

Paul Anderson was appointed sales representative in the Northwest for Feedstuffs and for Croplife. A 1949 graduate of the University of Minnesota school of journalism, he previously was advertising manager of the Marshall (Minn.) Messenger for four years and business manager for American Feed & Grain and Hardware Age, publications of Bruce Publishing Co., St. Paul, for about two years.

Mr. Smith is a graduate of the University of Connecticut, where he received a B.S. degree with high honors from the College of Agriculture. He also attended the University of Bridgeport in Connecticut and the University of Florida at Gainesville. Before attending college he was employed by General Electric Co.

Other appointments announced are: Frank W. Cooley, Jr., advertising sales manager of The Northwestern Miller and Milling Production; Walter O. Buchkosky, production superintendent; Kenneth W. Wakershauser, editorial assistant, and Leland C. Hubert, advertising production assistant.

Mr. Cooley joined the editorial department of the Miller firm 10 years ago and since 1952 has been editor of The American Baker. He is a graduate of the University of Minnesota school of journalism.

Mr. Buchkosky for the past five years has been associated with the H. M. Smyth Printing Co., St. Paul, for three years as production manager.

Mr. Wakershauser comes to The Miller Publishing Co. from Minneapolis Suburban Newspapers, Hopkins, Minn., where for three years he was city editor of the Hennepin County Review. He previously served five years as reporter-photographer on the Fairmont (Minn.) Daily Sentinel. He is a 1948 graduate of the University of Minnesota School of Journalism.

Mr. Hubert for four years was publications consultant with American Yearbook Co., at Owatonna, Minn. and Hannibal, Mo. Earlier he was advertising manager of C. M. Stendal, Inc., a Minneapolis retail shoe store. He is a journalism graduate of the University of Wisconsin.

New Nutrition Developments Outlined at Arkansas Meeting

By JAMES W. MILLER
Feedstuffs Editorial Staff

FAYETTEVILLE, ARK.—A nutrition conference befitting of the growth in prominence of the formula feed industry in the state was held at the University of Arkansas here Sept. 20-21. More than 165 persons attended the two-day meeting which featured developments in poultry and cattle nutrition.

Sponsored by the Arkansas Feed Manufacturers Assn., the Midwest Feed Manufacturers Assn. and the university, the sessions stressed quality and balance in feed formulation and the utilization of surplus grains, roughages and poultry byproducts to effect an economy in feeding operations. New concepts of the effects of pelleting were also discussed, along with other topics.

Energy and Protein: Because of the importance of broiler feeding in Arkansas, the remarks of Dr. E. L. Stephenson of the department of animal industry and veterinary science on energy, fat, amino acid and protein interrelationships were of major interest. With the trend toward higher energy levels in broiler feeds, attention has been focused on protein level and quality, he said. Various protein-energy ratios have been suggested with the majority ranging from 40 to 50 calories of productive energy per pound for each percent of protein.

Dr. Stephenson pointed out previous work has suggested that inter-relationships exist between certain amino acids with one specific relationship being that of lysine and methionine. These were shown to be required by chick in a ratio of 2:1, respectively. This relationship appears to be extremely important in broiler formulas currently in use. Certain apparent disagreements in published material may also be at least partially explained on the basis of amino acid imbalances, he said.

Many present protein sources are adequate in lysine and several contain the level of methionine listed by the National Research Council as the minimum requirement of the chick. Most of these, however, contain lysine-methionine ratios that are wider than 2:1. Work at the University of Arkansas has indicated that in many cases amino acid balance rather than adequacy may be the limiting factor. Responses have been obtained by reducing certain amino acids to obtain a more proper ratio. Growth depressions have also been obtained when the addition of an amino acid created an imbalance although the diet was deficient in the amino acid added. When other amino acids were added and the proper balance maintained the deficiencies were alleviated and a growth stimulus resulted, Dr. Stephenson said.

The addition of animal fat to a diet containing an improper amino acid balance apparently resulted in a magnification of the growth suppression resulting from the imbalance. The inclusion of higher protein levels tended to lessen the growth. If the amino acids were properly balanced, increasing the calories by the addition of fat did not appear to increase the chick's protein requirement, Dr. Stephenson reported.

Unidentified Factors: Supplementing of poultry rations with unidentified growth factor sources is more necessary now than ever before, Dr. J. H. Hare, Chas. Pfizer & Co. nutritionist, said in his talk at the conference. Noting the present, wide-scale use of high-energy diets by poultry raisers, Dr. Hare revealed that overall results of tests conducted at university experiment stations and at the Pfizer Agricultural Research Center indicate that "as the productive energy of a diet is increased, the response to unidentified growth factors in the diet becomes progressively greater."

Dr. Hare cited tests using four-week-old chicks in which protein in the diet was held constant while calorie levels were increased. He said chicks receiving diets supplemented with .30% Vigofac, a fermentation source of unidentified growth factors, showed consistent gains of up to 9% in growth over birds not receiving the Vigofac supplementation. This growth response was increased percentagewise as calorie levels were increased. Feed efficiency was not seemingly materially affected in any of the tests where UGF sources were used, according to Dr. Hare.

Poultry By-Products: That the use of feather meal and other such poultry by-products in broiler rations will mean greater feeding economy was brought out in a discussion by Dr. O. H. M. Wilder of the American Meat Institute Foundation, University of Chicago. Based upon the amount of broilers produced in Arkansas last year, approximately 6,500 tons of feathers could result from processing this poultry, Dr. Wilder said. Keratin proteins such as feathers are indigestible in their original state, but recent processing advances have made them assimilable by animals and birds.

Keratin proteins contain a relatively high percentage of glycine,

BLACK MARK AGAINST BLACK SHEEP

LARAMIE, WYO. — Two large sheep ranches in Wyoming stopped using black sheep as markers in herds when the Wyoming University wool department traced black-wool fibers in white-wool cloths to the black sheep in the flock. The white brushed against the black sheep and gathered fibers. Mills have refrained from using domestic wool containing black fibers—there is no mechanical process to remove them and hand-picking is costly. Wyoming University specialists are working to eliminate the need for black counters in a flock by using soluble branding fluids, colored canvas coat and colored cotton neck bands.

He Says His . . . Hot Spot Detector System Was . . .

"BEST INSURANCE POLICY I COULD HAVE EVER BOUGHT"

CLARK S. RHODEN, President of Tarkio Popcorn Co., Tarkio, Missouri, Reports . . .

"It is impossible to describe to you the confidence your Hot Spot Detector temperature system has given our company.
"Recently the system warned us of a heating area in a 11,000 bushel bin. We watched it with our Hot Spot system. The temperature was rising slowly over a five-hour period — and we immediately knew we had a 'hot spot.'

"We Were Able to Turn and Move This Popcorn Before Any Damage.
"It goes without saying, the Hot Spot system saved us an enormous amount of money . . . and it gives us the insurance that we produce a top quality merchandise without damage. It's the best insurance policy I could have bought."

1,500 Other Users Of Our Systems Will Tell You Similiar Experiences . . . Let Us Help You, Too!

HOT SPOT DETECTOR, INC.
214 THIRD STREET • DES MOINES, IOWA

Production of Millfeed Off Slightly

Production of millfeed in tons for week ending Sept. 21, and prior two weeks, together with season total of (1) principal mills in Nebraska, Kansas and Oklahoma and the cities of Kansas City and St. Joseph; (2) principal mills of Minnesota, Iowa, North and South Dakota and Montana, including Minneapolis, St. Paul and Duluth-Superior; (3) mills of Buffalo, N.Y. Production computed on the basis of 72% flour extraction.

	Southwest* Weekly production	Southwest* Crop year to date	Northwest* Weekly production	Northwest* Crop year to date	Buffalo† Weekly production	Buffalo† Crop year to date	Combined** Weekly production	Combined** Crop yr. to date
Sept. 17-21	28,149	300,931	14,934	164,618	12,361	129,776	55,444	595,325
Prev. week	‡27,860		‡16,014		‡12,580		‡56,454	
Two wks. ago ..	23,870		14,012		9,977		47,859	
1955	27,762	303,231	16,172	158,877	1,502	71,905	45,437	534,013
1954	26,363	296,679	15,597	258,841	11,872	120,196	53,832	675,716
1953	26,132	281,175	16,150	154,531	11,151	113,762	53,433	549,468
1952	25,741	298,748	16,545	175,934	10,269	116,863	52,555	591,545

*Principal mills. **74% of total capacity. †All mills. ‡Revised.

cystine, arginine and phenylalanine important in poultry nutrition, but are low in lysine and methionine, so they cannot be used as a sole source of protein. To test the best balance between feather meal and other protein sources, a series of chick feeding tests was started four years ago by a number of state agricultural experiment stations and the U.S. government, Dr. Wilder said. The basal ration used was corn-soybean oil meal, and combinations of meat and bone meal, blood meal and feather meal were tested to compare with the basal diet. The ideal ration found out of this work was 9.6% soybean oil meal, 2.4% meat and bone meal and 2.4% feather meal. This yielded an optimum weight at eight weeks of 2.69 lb. on chicks with a feed conversion of 2.40, Dr. Wilder reported.

Work is being continued on hair, hoof and horn proteins, he added, since these keratin proteins contain a different amino acid balance than feathers. Also, the speaker brought out that the presence of certain unidentified growth factors in feather meal might be connected with the protein element of the material. This is yet to be determined, he said.

Soybean Oil Meal: Wilfred Witz of the Archer-Daniels-Midland Co., Minneapolis, followed Dr. Wilder's talk with a discussion on vegetable proteins, specifically soybean oil meal. Plant type proteins make up 80% of all available proteins to the feed industry, he said, while the rest are animal types. The speaker presented a summary of the growth of the vegetable protein processing industry and indicated that based upon present animal population figures in the U.S., the industry yet supplies only about two-thirds of the optimum requirements for feeding. As population of the U.S. increases, the needs of vegetable proteins also will go up, reaching an estimated 11 million tons in 1975.

The speaker pointed out the various characteristics of types of extraction and expeller soybean oil meal. From the standpoint of nutrition, it must be taken into consideration that this ingredient lacks the sufficient amount of lysine for use in high-energy type rations and that other protein sources must be used to attain amino acid balance.

Ruminant Feeding: Considerable emphasis was placed on beef cattle rations at the conference. Discussions on stilbestrol and winter disorders of cattle on low quality roughage were given by Dr. C. K. Whitehair of Michigan State University, East Lansing. The subject of milk replacers in calf nutrition was handled by Dr. Foster Owen of the Arkansas staff and two other members of the university faculty, Dr. M. L. Ray and Dr. O. T. Stallcup, spoke on feeding and supplementation of low quality roughage and nutrition of rumen micro-organisms.

Dr. Whitehair predicted that additional hormones and various combinations of hormones and antibiotics could prove even more effective in beef feeding than those in current acceptance. However, most hormones are known to have rather potent metabolic functions on many body activities, he said, and therefore should be used only after carefully conducted and extensive experimental data is available.

Several theories have been advanced as to the mechanism by which the estrogenic-like substances and other hormones improve the rate of growth and feed efficiency in livestock. Most evidence indicates that these substances have a specific anabolic effect in increasing the efficiency of utilization or conversion of the various nutrients such as energy, protein and minerals to living tissues. An enormous amount of data has been accumulated by federal, state and private laboratories as to the danger of hormones. To date, there is no evidence that the hormones when used as recommended constitute a possible hazard to the public welfare or in livestock raising operations, Dr. Whitehair said.

Winter Disorders: In his second discussion, on winter disorders, the Michigan staff member said that such disorders are common in cows on a cow-calf type of beef program using low quality roughages. The treatment of these "downer" animals consists of stimulating the appetite by feeding protein supplements, minerals and good quality roughage, usually alfalfa hay. Cobalt salts seem to be especially helpful in restoring appetite. All emphasis should be placed on preventing the disturbance since, in general, treatment has not been too satisfactory, the speaker said.

In experimentation with sheep on low quality roughage, a very similar disturbance occurred in ewes, Dr. Whitehair said. The value of additional concentrate feed supplying, especially energy and protein, was clearly demonstrated in these experiments.

Other tests have shown that urea and other similar non-protein nitrogen compounds can partially replace pre-formed protein in the rations of cattle. It should be remembered that in using these substances with low quality roughages, supplements of additional energy, phosphorus, trace minerals and Vitamin A should be added, Dr. Whitehair cautioned.

Certain dangers and possible disturbances arising out of such non-protein feeding were brought out by the speaker: (1) Feeding urea-containing feeds to starved or fasted animals, (2) feeding larger amounts than recommended by feed control officials, (3) animals that have a depraved or hoggish appetite, and (4) feeding urea with large amounts of roughage in rations not supplemented with adequate energy and minerals.

Low Quality Roughage: Because high quality roughages have been in short supply due to the drouth, Arkansas feeders have had to rely upon lower quality substances to considerable extent, Dr. Ray said. Proper supplementation is the key to good results on low quality roughages, he said.

The speaker reviewed the following feeding tests pertaining to the problem: (1) Silage fed calves consistently made larger and more efficient gains than did similar calves fed on Sudan grass hay, prairie hay or lovegrass hay. (2) Heifers fed sericea lespedeza plus grain gained more per day than those fed prairie hay and grain. (3) As much as 15%

(Continued on page 81)

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
623 Board of Trade
KANSAS CITY, MISSOURI

ILLINOIS LABORATORY—The newly-equipped Illinois feed and fertilizer control laboratory at Springfield is divided into nine divisions, each in a separate room. These include micro-biological; instruments; fat extraction; mineral determination; drugs and vitamins; microscopic; sample preparation; receiving, balance and titrating; Kjeldahl and crude fiber. Prior to its conversion this year, only one room in the building had been devoted to feed control work since 1927.

Illinois Feed Laboratory Dedication Set

SPRINGFIELD, ILL.—Gov. William G. Stratton will dedicate the newly-equipped feed and fertilizer laboratory at the Illinois State Fairgrounds, Oct. 3.

Stillman J. Stannard, director of the Illinois Department of Agriculture, said the rehabilitated laboratory is equipped to analyze 10,000

(Continued on page 81)

Fruen's fine reputation for quality and service is the result of over half a century's experience in serving the feed trade. Our long list of grain products—one of the most diversified in the industry—guarantees you grain ingredients milled to your exact needs.

Send for samples and prices today

Mixed cars shipped at straight car prices

Our Teletype number is MP 477

TOWER BRAND ROLLED OATS (Steam processed)
ACE BRAND ROLLED OATS (Steam processed)
WHOLE OAT GROATS
STEEL CUT OAT GROATS
BOLTED OAT FLOUR
GLENWOOD FEEDING OAT MEAL
FALCON BRAND PULVERIZED WHITE OATS
STANDARD BRAND PULVERIZED WHITE OATS
DAIRY BRAND COARSE GROUND OATS
CRESCENT BRAND PULVERIZED OATS
CORN OATS PELLETS (Corn-Oats)
ENERGEE PULVERIZED OATS
MIXERS' PULVERIZED OATS
MIXERS' COARSE GROUND WHITE OATS
MIXERS' PELLETED OATS
APEX BRAND CRIMPED WHITE OATS
OAT FEED
STEAM ROLLED WHOLE BARLEY
GROUND BARLEY
PEARLED BARLEY FLAKES (Max. 2½% fiber) (steam processed)
GLENWOOD PEARLED BARLEY
STAR CRACKED PEARLED BARLEY
STEEL CUT WHEAT
ACME GROUND DOMESTIC FLAX SCREENINGS
GLENWOOD GROUND GRAIN SCREENINGS

If you want pelleted and crumblized formula feeds under your private label, write us for details.

Millers TO THE FEED TRADE

FRUEN MILLING COMPANY
MINNEAPOLIS 5, MINNESOTA

Pet Food Manufacturers Told Of Large Market Potential

By HARVEY E. YANTIS
Editor of Feedstuffs

CHICAGO—Three fourths of the pet food market potential is untapped, members of the American Pet Food Manufacturers attending a convention in Chicago Sept. 20-21 were told. The organization is a division of the American Feed Manufacturers Assn.

(Editor's Note: Most of the convention program was reported in the Sept. 22 issue of Feedstuffs. The final session is reported herewith.)

Sam G. Barton, president and chairman of the board, Market Research Corp. of America, cited comparisons in the pet food market compiled from surveys made by the National Consumer Panel five years ago and currently.

Five years ago, he said, it was estimated that there were 15 million dog owning families in the country. Of these families, three fourths owned one dog, about one fifth owned two dogs, and about 6% owned three or more dogs. These families with several dogs include about 17% of the U.S. civilian dog population. At that time, about 45% of the dogs were small—under 25 lb.; 43% weighed 25 to 50 lb. and 12% weighed over 50 lb. As to age, 20% were less than year-old pups, while about 60% were aged one to six years, leaving about 22% as being age over 7 years. About two thirds of the dogs were pets, about 22% hunting dogs, and some 10% herding, and only 5% show or breed dogs.

The 5-year-old census estimated 42% of the dogs as being mixed or mongrels, 29% as sporting-type dogs, 14% as working dogs, 12% as terrier or toys and 3% as non-sporting or other types. The incidence of dog ownership runs high in the broad southern areas of the country, compared with the eastern, central and western regions, and the incidence of families with several dogs runs high in the South as well. Dog ownership runs extremely high among farm families, and well over one third of farm families have two or more dogs.

"The dog population has increased several millions in the past five years, but the proportion of families owning dogs has not increased," Mr. Barton said. Through the use of slides, he showed numerous breakdowns of the current survey figures, comparisons with the former survey. Some 76% of farm families own one or more dogs, often more than one. Families in rural, non-farm areas are 42% dog owners, while the incidence drops sharply in the larger cities to a low of 23% for families in cities of 500,000 population or more. For the country as a whole, dog ownership runs about 44% for families in single unit, detached dwellings, while it is only about 23% for families in multiple dwellings. One- and two-person families are least apt to have a dog, while the incidence of ownership runs well over 50% among large families with six or more members.

Inasmuch as families in rural areas tend to be larger, and larger families are apt to have some kind of single, detached dwelling, there is some correlation between all of these factors, Mr. Barton said.

A result of the market study is to indicate that the lowest incidence of dog ownership — about 11% — was among families in cities of 500,000 and over, who do not live in a single unit, detached house and who do not own a TV set, and do not have any children under age 13. The highest incidence of dog ownership was found among families with all the opposite characteristics: About two thirds dog ownership was found for families living in places under 50,000 population or on a farm, who live in a single unit, detached house, who do not own a TV set, and who do have children under age 13.

These and similar market survey statistics were cited by Harry Harding, senior vice president of Young & Rubicam, to support his premise that the growth of the pet food business shou'd be expected from pet owners who do not feed commercial rations. No more than a fourth of the nation's dogs are fed commercially prepared feeds, he estimated. He reviewed, by means of slides, typical advertisements of leading dog foods, and made the point that most of these ads seem to assume that every dog owner is or wants to be a user of commercial rations. Yet the surveys show that three fourths of the potential market needs to be convinced of the value of this type of feeding, Mr. Harding said. He expressed the belief that the advertising would be more productive if it tried to convert the non-users of a dog food to the advertiser's brand, rather than to aim at the smaller portion of the market, which is highly competitive.

"If this were done, then the total market and your share of it both wou'd grow," Mr. Harding said.

Raymond J. Hanfield, executive secretary of the National Dog Welfare Guild, described the work of his organization, which has as its objective the promotion of dog ownership. A large part of the work is designed to educate dog owners to the proper care and attention for their pets, in order "to make every dog a good citizen of its community." This, Mr. Hanfield said, would forestall much of adverse legislation and other restrictions against pets.

Check Package Design

In designing an appealing dog food package, it is essential to have a strong trademark, according to two package design experts who spoke during the second annual pet food convention. A "strong" trademark, they explained, is a symbol that is instantly recognized and easily remembered.

James Nash, president, and James Spencer, executive vice president, Jim Nash Associates, Inc., New York, presented a dual discussion on "Making Packaging Work for Your Profits."

The speakers claimed that a great improvement could be made in dog food packaging and said that "the entire dog food section of the supermarket has become a hodge podge." The few dog food manufacturers who

(Continued on page 81)

CROWNED—Blanche Kos, 19-year-old Chicago girl, is crowned Miss Bow-WOW of 1956, queen of the pet food industry by Walter Kendall, chairman of the executive committee of the American Pet Food Manufacturers, a division of American Feed Manufacturers Assn. The event took place during the second annual convention of the APFM at the Drake Hotel in Chicago.

Role of Minerals in Feeds Stressed at NMFA Convention

By HENRY S. FRENCH
Feedstuffs Editorial Staff

CHICAGO—Many examples of the growing importance and expanding acceptance of minerals in animal and poultry nutrition were offered at the annual convention of the National Mineral Feeds Assn., held at the Sheraton Hotel here Sept. 19-21.

Chief evidence of the wider market for minerals was provided by the report to the Scientific Advisory Committee, which featured summaries of research projects conducted by some of the outstanding poultry and livestock research scientists in the nation. Research grants-in-aid by the NMFA and some of its members have been made to help stimulate mineral research at university experiment stations in the last three years. Continuing investigations in phosphorus, trace minerals and mineral nutrient balance are planned for the future.

Mineral elements, it was pointed out several times during the meeting, are the basic building blocks of animal life. Maurice E. Baringer, Oelwein (Iowa) Chemical Co., chairman of the Scientific Advisory Committee, said that research developments in the last year show that the feed industry is only at the beginning of its utilization of minerals, particularly of phosphorus.

A preliminary report of the convention was carried on page 4 of Sept. 22 Feedstuffs. At the annual business meeting, Art Swarzentruber, Vigortone Products, Inc., Cedar Rapids, Iowa, was named the new president of the NMFA. Other officers include J. J. O'Connor, Walnut Grove Products Co., Atlantic, Iowa, vice president; C. S. Langen, Moorman Mfg. Co., Quincy, Ill., vice president, and William A. Power, Puritan Laboratories, Des Moines, treasurer. Peter W. Janss, Des Moines, was reelected executive secretary.

At the Scientific Advisory Committee meetings Sept. 19, C. W. Carrick, Purdue University, Lafayette, Ind., reported the results of a series of poultry experiments with phosphorus from many sources, alone and in combination, and for various stages of growth and maturity.

Other researchers reporting included: Dr. George K. Davis, University of Florida, Gainesville; Vaughn Speer, Dr. Damon Catron and Dr. Wise Burroughs, Iowa State College, Ames; Dr. J. R. Couch, Texas A&M College, College Station; Dr. William Beeson, Purdue University, and Dr. R. C. Miller, Pennsylvania State University, University Park.

Selling Power

The convention program was opened by Russ Bagnall, Arbie Mineral Feed Co., Marshalltown, Iowa, retiring president. The most important power, he said, is selling power, and urged all delegates to do a selling job for their association and their industry.

Herman Holmes, manager of the Iowa unit of Pfister Associated Growers, Monroe, Iowa, told how "taking the story to the people" helped hybrid seed corn grow in use. Salesmen, he said, must call on people and be aggressive.

(Continued on page 77)

William Sprenkle Heads Pennsylvania Feed Association

By GEORGE W. POTTS
Feedstuffs Editorial Staff

READING, PA. — William H. Sprenkle of Spangler & Sprenkle, Inc., York, was elected president of the Pennsylvania Millers & Feed Dealers Assn. at the annual business meeting of the group held during its 78th annual convention here Sept. 24-26. He succeeds Carl W. Boyer, Pottstown (Pa.) Roller Mills.

B. E. Zechman, Zechman's Flour Mills, Potts Grove, was elected first vice president; Robert I. Aten, D. D. Fritch Milling Co., Macungie, was named second vice president, and T. Luke Toomey, Toomey's Mill, Wila, was reelected third vice president.

Richard I. Ammon, Ephrata, is executive secretary of the association, and John L. Zug, Richland, is the new treasurer.

Directors reelected were C. G. Pritts, Pritts Feed & Supply Co., Smithtown, and F. Clay Erdley, Big Valley Feed & Grain Co., Belleville.

New directors elected were Alvah Fassett, Brown & Fassett, Tunkhannock; Robert G. Graybill, Miller & Bushong, Inc., Rohrerstown, and Arthur B. Stover, Edwin F. Stover Estate, Perkasie.

Following a general convention theme of "serving tomorrow's farmer," program speakers called the attention of the feed men to their traditional responsibility of advising farmers on feeds, seeds, farm problems, animal health and advances in the field of nutrition.

Highlight of the convention was the annual banquet attracting approximately 600 and featuring an address by Ezra Taft Benson, secretary of agriculture.

The sixth annual "old dusties" golf tournament was scheduled for Sept. 26 at the Reading Country Club.

Broiler Prices Turn Stronger

SALISBURY, MD.—Broiler prices showed improvement last week after weeks of declining prices. The average price paid per pound in the Delmarva area for the week ending Sept. 22 was 19.57¢. A week earlier the price was 18.33¢.

Chick placements in 22 reporting states totaled 21,198,000 for the week ending Sept. 22. This was 1% more than the previous week and was 20% more than during the same week a year ago. Of the 22 states, placement increases from a week earlier occurred in 13 states. Largest increases occurred in Delaware, Pennsylvania, and Arkansas, while greatest decreases occurred in California, West Virginia and Alabama.

Egg settings in the 22 states totaled 29,290,000. This was 2% less than the previous week but 15% more than during the same week a year ago. Increases over the previous week occurred in six of the 22 states, with largest increases occurring in Maine, Alabama, and Maryland. Largest decreases occurred in California, Pennsylvania, and Indiana.

In the Delmarva area, broiler chick placements at 3,046,000 for the week were 5% more than a week earlier and 28% more than a year ago. Sharply higher inshipments more than offset a 1% decline in local hatchings. Settings at 3,362,000 were down 1% from the previous week but were 7% greater than during the same week of 1955.

The price of 20% broiler feed dropped over $1 ton to $97.31. A pound of broiler meat would buy 4 lb. of feed, compared to 3.7 the week before. A year ago when the price of chickens was 23.8¢, the ratio was 5.1.

HERE'S NEW *"Profit Power"*

FOR YOUR DAIRY AND CATTLE FEEDS!

The people who buy your cattle and dairy feeds want two things . . . two things not always found in the same bag . . . maximum quality and maximum economy. *Borden's Bospro will help you give them what they want.*

For years, Borden's Bospro has been recognized by quality-minded feed manufacturers as the ultimate in fortification for ruminant rations.

Successful mills all over the country rely on Bospro to help their feeders avoid the serious losses which can result from disease, slow growth and lowered milk production.

Yes, Borden's Bospro is a very important ingredient in modern cattle and dairy feeds, because it helps promote *greater utilization of low cost roughage* and stimulates the appetite to insure steady feed consumption. It greatly helps increase rumen activation, permitting the rumen micro-organisms to speed up the manufacture of many of the nutrients required for profitable milk and beef production.

Write now . . . send the coupon *today* . . . get the full and complete story . . . take the first step towards "Profit Power"!

BORDEN HELPS YOU SELL, TOO!

Your feeds, when fortified with Borden's Bospro, are privileged to carry the Ruma-Fixed Seals, among the strongest sales stimulators in feed merchandising today.

Borden supplies you with hard-hitting promotional materials of all kinds . . . sew-on tags, newspaper mats, advertising copy, sales bulletins, etc.

No matter how good your feeds are, they still have to be sold. "Ruma-Fixed" merchandising will help you do it!

RUMA-FIXED FOR RESULTS

RUMA-FIXED FOR RESULTS

Borden IS BASIC IN FOOD AND FEED RESEARCH

THE BORDEN COMPANY FEED SUPPLEMENTS DEPARTMENT
350 Madison Avenue New York 17, N. Y.

Please send us:

☐ Technical data on **Borden's Bospro.**

☐ Complete information on the **"Ruma-Fixed" seals.**

Name .....
Firm .....
Address .....
Town .....

Feed Men Hear Reports on New Iowa Research Findings

By ROGER BERGLAND
Feedstuffs Editorial Staff

AMES, IOWA—The fact that there is always something new in feeding and nutrition research was borne out at the recent Iowa Nutrition Conference.

The conference, held Sept. 14 at Iowa State College, included reports on a number of new developments and ideas stemming from research at Iowa State.

Among the research projects reported on were: The Iowa State work on feeding pepsin to baby pigs; new work on the "Iowa Economy Supplement" for beef cattle; "least-cost" rations for turkeys; possible new methods of preventing bloat in cattle; and use of radioactive tracers in nutrition studies.

Whether or not all of the findings have widespread immediate application commercially, the reports provide an indication of new developments now felt by the researchers to be ready for feedlot or farm application or of possible things to come in feed manufacture or feeding.

The large crowd of feed men on hand for the conference also heard talks on the development of the use of drugs in feeds, new ideas on materials handling on the farm and an explanation of how farmers adopt new ideas.

PEPSIN IN PIG FEEDS: Dr. Damon Catron, in charge of swine nutrition research at Iowa State, presented a progress report appraising the present status of enzyme feeding research with baby pigs.

He said accumulative research would indicate that all pre-starter rations for baby pigs under two weeks of age should be fortified with pepsin, protein-digesting enzyme. This includes even those containing milk. Many feed manufacturers, he continued, will probably find that it pays to fortify their starter rations with enzymes for pigs up to about five weeks of age after careful field testing. He advised field testing with different levels.

Dr. Catron said it is "very questionable" whether it is advisable to recommend use of pepsin in grower rations, unless these older pigs—between 25 and 50 lb.—are scouring.

Levels Tested

The Iowa station has completed more than 20 experiments involving more than 2,000 pigs to which pepsin has been fed at different levels starting at about one week of age (about 6 lb. of body weight) and terminating at five weeks of age. Pepsin has been fed at 0, .0625, .12, .25, .50 and 1.0% of the total ration. The practical level appears to be .25% of the total ration, Dr. Catron said.

The response of the baby pigs to pepsin in terms of gains and feed efficiency has been quite variable. Per cent increases in one-to-five-week gains due to 1% pepsin supplementation have ranged from -8% to +40%, and feeding saving has ranged from -12% to +21%. The averages have been a 6% increase in gain and a 4% improvement in feed efficiency. Not all of the data stand up statistically, but the findings are believed to be an indication of things to come in the future.

In connection with the results, Dr. Catron noted that the degree of response seems to depend considerably on age and incidence of scouring.

The degree to which baby pigs are deficient in enzymes is not completely certain yet, Dr. Catron said, and further work on this is needed. However, the limited basic research by Canadian and the Iowa workers indicates that the baby pig is deficient in digestive enzymes from birth up to about five weeks of age. The younger the pig, the more deficient he is in enzymes—primarily pepsin, and pancreatic amylase to a lesser extent. Therefore, one would expect that the younger the pig, the greater the response to enzyme supplementation, regardless of whether he is nursing his mother and eating a pig starter out of a creep or if he is early weaned and eating a pre-starter and/or starter ration.

Dr. Catron said the research indicates that there is a direct relationship between incidence and degree of scouring and response to pepsin supplementation. For example, pigs in a special laboratory with a very low disease level actually gained less and required slightly more feed than those on a basal ration. On the other hand, pigs in a conventional unit, when supplemented with 1% pepsin, gained 11% faster on 8% less feed.

Dr. Catron said he would expect that feed manufacturers would get a greater response to enzyme supplementation under their experimental conditions and hog producers would actually get even a greater response under their feedlot conditions with a higher disease level.

"It appears that the higher the disease level, the greater the incidence of scouring and the greater the response to pepsin supplementation," Dr. Catron said. "I might also point out that the higher the disease level, the greater the response we get to antibiotic feeding. When a baby pig has the scours, there is an increase in intestinal motility and the food passes through the digestive tract at a more rapid rate. The younger the pig, the less the concentration of enzymes which he has to digest the feed, and it is under these combined conditions that we would expect the greatest response to enzyme supplementation."

At any rate, it appears definite that the baby pig is deficient in certain enzymes, and Dr. Catron looks for this basic scientific discovery to have a profound effect on the formulation of baby pig rations and management of baby pigs in the future.

BEEF CATTLE FEEDING: Some cattle have made liveweight gains in excess of 3 lb. per day during long feeding periods in experiments using the "Iowa Economy Beef Supplement," Dr. Wise Burroughs, cattle nutrition researcher, told the conference. He said that this supplement, developed during the past two years at Iowa State, shows promise of cutting beef fattening costs almost as much as the recent discovery of "record-breaking" benefits of stilbestrol in cattle feeding. Performance on the economy supplement in three recently completed tests has been just as good or better than on any other supplement tested.

Details of the results will be reviewed at the annual Cattle Feeders Day Oct. 17 at Iowa State College.

Dr. Burroughs noted that the economy supplement contains ingredients "radically different from present-day conventional supplements." But, he said, when this supplement produces results as good or better than with any other supplement tested, regardless of cost, "a new development has been achieved in beef cattle nutrition."

People will say the supplement "won't work," Dr. Burroughs said; but, citing research results, he called it a "real milestone" and expressed enthusiasm about its use.

The make-up of the supplement per ton is: dehydrated ground corn cobs, 1,150 lb.; molasses, 400 lb.; urea, 200; dicalcium phosphate, 110; limestone, 75; salt, 40; "Stilbosol" (stilbestrol premix), 20; trace mineral premix, 5 lb.

Difference Noted

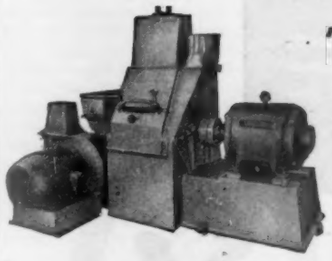
The most radical difference from conventional supplements, Dr. Burroughs said, is the inclusion of the large amount of corncobs. The second radical difference, he said, is the absence of oil meal or dehydrated alfalfa.

The supplement is designed for use with a heavy-corn ration, as under Iowa conditions.

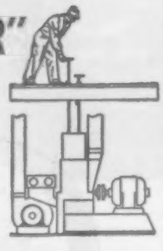
"Each ingredient was placed in the supplement to do a particular job in supplementing at lowest cost all the deficiencies of a heavy corn fattening ration in bringing about top

FEED TECH ON TV—C. G. Lindsey, Jr. (left), chairman of the feed technology advisory committee, and Max Milbourne, assistant to President James McCain of Kansas State College, look over a list of television stations which are publicizing the feed tech program at Kansas State during September in the series "Industry on Parade" sponsored by the National Association of Manufacturers. Nearly 250 stations are scheduling the weekly TV feature newsreel distributed by the association as a public service program. The latest film includes a visit to the feed tech facilities. Mr. Lindsey, who is president of Lindsey-Robinson & Co., Roanoke, Va., recently visited the school at Manhattan, Kansas.

Top Hammermills for Custom Grinding . . .



"MASTER"
55 to 140 HP.
Instant Screen Change from Service Floor



"AJACS"
20 to 150 H.P.
Quick Screen Change

BOTH ARE QUALITY PRODUCTS OF

Jacobson MACHINE WORKS

46 Years of Continuous Service to the Feed Industry

1090 TENTH AVE. S.E. Dept. M MINNEAPOLIS 14, MINN.

SCROGGINS GRAIN CO.
Phone FE 5-3913 — Teletype: MP 344
WHOLE and GROUND GRAINS and SCREENINGS
MINNEAPOLIS, MINNESOTA

Question:

Who sells Dow Methionine for healthier, handsomer animals?

Answer:

BOWMAN FEED PRODUCTS, INC.
Holland, Mich.

COLUMBIA SOFT PHOSPHATE
IMMEDIATE DELIVERY
LOW COST
WRITE FOR INFORMATION
Columbia Phosphate Co.
1007 Washington St. Louis, Mo.

feedlot performance," Dr. Burroughs said.

"Urea was selected in furnishing essentially all of the 28% protein equivalent because urea supplied protein equivalent more cheaply than oil meals and no advantages of oil meals over urea with respect to energy seemed likely in view of the fact that the corn in this particular ration supplied adequate energy. The molasses was put in the supplement to supply unidentified factors needed by rumen microorganisms." Dr. Burroughs said they were not able to capitalize on other unidentified factor sources under the Iowa conditions of heavy corn, hay and supplement.

Stilbestrol was included at the highest feeding level (10 milligrams per pound of supplement fed daily per steer) commensurate with good feeding practice, Dr. Burroughs said, and needed minerals were included.

The supplement is fed at a rate of 1 lb. per animal per day.

Corncob Use

The corncobs were used as economical absorbing agent for the molasses and to serve in dispersing the ingredients added in small amounts, including stilbestrol, trace minerals and urea. "These highly potent ingredients needed daily in tiny amounts cannot be uniformly consumed unless dispersed effectively on a minimum of about 1 lb. of supplement per animal daily where the supplement is top-dressed over hay and grain in the feed bunk," Dr. Burroughs said.

He said results with the economy supplement have been better this year than last year. In this connection he said that the supplement has been changed in one respect, using dicalcium phosphate this year and colloidal and defluorinated phosphates last year.

Dr. Burroughs reported on some work with phosphorus supplements in which the phosphorus from the dicalcium phosphate used was said to be highly available while that from the soft phosphate with colloidal clay was not.

Not all dicalcium phosphates, or all colloidal phosphates, may show equal availability, he said, but in the Iowa studies differences between the two types were noted. In connection with this study, he cited data indicating that the need for phosphorus in cattle rations is greater than the .18% mentioned in the literature. While it is not yet definite, the requirement is thought to be about .25 to .30%.

Discussing other aspects of cattle

DOW
Methionine
Get it in the Midwest from
Carroll Swanson Sales Co.
620 D. M. Bldg., Des Moines, Ia., Tel. CH 4-6177

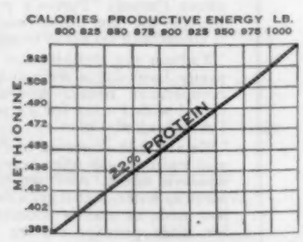
Formula change at hand?

RECHECK METHIONINE REQUIREMENTS

when you change ingredients or alter feed energy

Requirements for supplemental methionine change the minute you alter your feed formula. For example, any increase in the proportion of fat, corn or other high-energy, low-protein feedstuffs in your formula will alter the protein-calorie ratio.

In order to obtain maximum results, certain calorie-protein-amino acid relations must be maintained. The graph visually depicts this vital protein-calorie relationship.



Even if you interchange ingredients of equal energy value, you should review methionine requirements. Remember, calorie content is no measure of protein or amino acid. Replacing corn with wheat, for instance, will reduce natural methionine content by half, even though energy remains about the same. It is important to add additional Dow methionine to protect feed performance.

Dow methionine supplementation gives you greater formula flexibility, but it is wise to check requirements whenever you make a change. THE DOW CHEMICAL COMPANY, Agricultural Chemicals Sales Department, Midland, Michigan.

you can depend on DOW AGRICULTURAL CHEMICALS DOW

Over 70 Years of Efficient Service

DIAMOND REBUILDS AND OVERHAULS

All Makes Attrition Mills

DIAMOND BURR

Made in Several Styles for Diamond and Other Makes Attrition Mills

BURRS, RUNNER HEADS, REPAIRS. If anything needs repair or replacement to keep your mill running, DIAMOND offers quick, efficient service. We are headquarters for Mill and Elevator Equipment, Repairs and Parts. Ask for Prices.

RUNNER HEAD

Phone or Write

Diamond Huller Co., Winona, Minn.

feeding, Dr. Burroughs said that an average of college experiments indicated that antibiotic-stilbestrol experiments produced no greater response than stilbestrol alone. In Iowa studies, he continued, positive results have not been obtained from live rumen cultures for steers. In laboratory tests, he said, the rumen organisms which were alive were not cellulose-digesting. He mentioned certain other feeding tests in which a slight gain or no effects were observed.

POULTRY FEEDING: Figures obtained in Iowa State experiments make it possible to design "least-cost" turkey rations for a variety of price situations, Dr. Stanley L. Balloun of the poultry department reported.

Feed men may recall that "least-cost" and "least-time" rations for swine have been outlined previously at Iowa State, and in the poultry field, Dr. Balloun also has developed a system of least-cost rations for broilers. However, he feels that the least-cost system for turkeys is more practical because of the longer feeding period and the fact that turkeys are a one-crop-a-year operation for most farmers.

In connection with the least-cost principle for turkeys, he said that many more turkeys are over-fed on protein than are under-fed and research indicates that turkeys don't need as much protein as they may have been given.

Dr. Balloun said the reductions in turkey feeding cost come from the determination of how corn and protein can be used to replace each other under varying conditions. The varying amounts of one needed to replace a pound of the other for poults of various ages on rations containing varying amounts of protein can be calculated.

In the earlier periods—to 12 weeks, for example—not much savings can be accomplished by feeding a lower protein ration, Dr. Balloun said, but from 12 weeks to market weight, appreciable savings can be made by adoption of the "least-cost" principle. The protein level to use depends largely on the relative cost of corn and soybean oil meal.

System Explained

Illustrating the findings, Dr. Balloun said that experiments have shown that when poults are 12 to 16 weeks of age and are receiving a 12% protein ration, the addition of one more pound of protein to the ration will replace 5.39 lb. of corn, but when the ration gets up to 20% protein, one more pound of protein will replace only 1.33 lb. of corn.

Researchers have set up a set of exchange values for levels of protein between these extremes. If, for instance, the price of a pound of soybean meal is equal to the market price of 1.6 lb. of corn, the feed formulator checks the table until he comes to a level at which a pound of soybean meal will replace 1.6 lb. of corn. That happens to be between 18 and 19% protein for poults 12 to 16 weeks old, and the least-cost ration would fall between these two levels of protein. If one were to feed the same ration from 12 to 20 weeks, the least-cost ration would contain about 15.5% protein, the data indicate.

Under the free-choice feeding system, turkeys are likely to consume more protein than the least-cost ration calls for. Under this system, to achieve least cost, something needs to be done to limit mash consumption and encourage grain consumption. Dr. Balloun said possibilities are to limit amount of mash given daily, encourage grain consumption by cracking corn, or lower the protein content of the mash. Or, an all-mash system may be used. Reducing the protein of the mash part of the diet has been effective in achieving the least-cost ration in Iowa experiments.

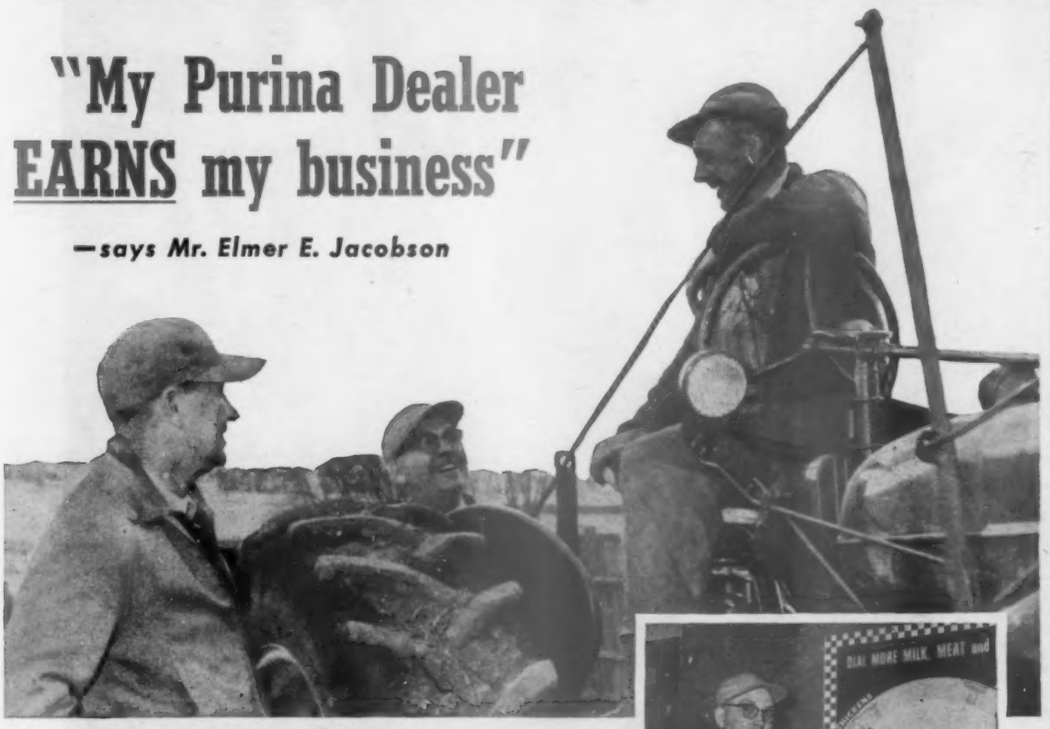
Protein-Energy Ratio

Reporting on other work, Dr. Balloun said that for poults up to six weeks of age, it has been shown that there is a distinct protein-energy relationship, but this relationship cannot be expressed as a simple ratio to suit all conditions.

With a diet containing 770 productive energy calories per pound, there was no improvement when the protein was increased above 26%, and 26% was not significantly super-

"My Purina Dealer EARNS my business"

—says Mr. Elmer E. Jacobson



Field work in Stoughton, Wisconsin, is just as important as it is anywhere. But Mr. Elmer E. Jacobson (on tractor) takes time out to talk over problems with his Purina Dealer, Obert Asleson, and his outside salesman, Herman Arneson.

When a truck from the City Feed Mill in Stoughton, Wisconsin, heads out on RR #2, one of the places it's probably going to stop is the Elmer E. Jacobson farm. The driver's going to get a fine welcome, too, because, as Mr. Jacobson puts it: "I appreciate the help given to me by the City Feed Mill. By helping me with a Purina program for my dairy cattle, I've seen cow condition improve and milk production increase.

"Not only are they of help with livestock, but poultry, too! When I ask, they are always willing to help during busy seasons by delivery and pick up of my grist and Purina needs.

"Their advice is always welcomed when I need help with a sanitation problem, or need some tips on management. My Purina Dealer is always a big help to me!"

Real Service to the Farmer

"I'd hate to tackle the feed business today, if I didn't have the Purina Franchise!"

That's what Mr. Obert Asleson, owner of the City Feed Mill in Stoughton, Wisconsin, thinks about Purina! "Purina's proven program of profits—for the dealer and for the feeder—is something no other competitor offers.

"Without the combination of those two, it's pretty hard for a feed dealer to survive the competition today! And having been associated with Purina for 21 years, I know what I'm talking about!

"We are able—because of Purina's know-how and training—to offer services no other feed concern offers. And we do many of these services without charge. That's something that has made us many customers, and given us a lot more prestige among the folks around our trade area.

"But without the help of Purina, I don't believe we'd have the position we have today!"

★ ★ ★ ★

If you'd like to know more about the Purina Franchise, and what it can mean to you, write:

RALSTON PURINA COMPANY,

1602 Checkerboard Square, St. Louis 2, Mo.

PEPSIN 1:3000, N. F.

SPOT and FUTURES

H. REISMAN CORPORATION

114 Liberty St., New York 6, N. Y.

CONSULTANTS

TO THE

FEED INDUSTRY

C. W. SIEVERT and ASSOCIATES

Room 1339

221 N. LaSalle St. Chicago 1, Ill.

The farmer's daughter knows that one of the...

plus factors OF PAPROCO

West Coast Condensed FISH SOLUBLES with Fish Glandular and Liver Hydrolysate is

+ Unidentified Growth Factor(s)

A CONVENIENT PRE-MIX

Sea-Maid '40'

Contains PAPROCO Condensed Fish Solubles, fish glandular and liver hydrolysate, solvent extracted soybean oil meal and phosphate mineral, manufactured by a patented process which requires no heat and preserves all the nutritive qualities of these ingredients. Sea Maid "40" is convenient and easy to use, requiring no special mixing equipment. Packed in 100 lb. multiwall paper bags, Sea Maid "40" is easily added to any formula.

Practical feeding experience has proved that a basal ration fortified with PAPROCO West Coast Condensed Fish Solubles (with fish glandular and liver hydrolysate added) stimulates growth in both poultry and swine. The growth response to the fortified ration is greater than the same basal ration with all the known nutritional factors added. These unidentified growth factors provide the extra punch in your feeds which mean satisfied customers and increased profits for you. PAPROCO gives you the following *plus* factors:

- + Unidentified Growth Factor(s)
- + B-12 and all known B-Complex Vitamins
- + Amino Acids from Fish Protein
- + Essential Trace Minerals
- + The "Carry Over" Factors in Breeding Rations
- + Manufactured by Lassen Process
- + Double Screened to remove Excess Solids
- + Assured Year 'Round Supply

Complete analysis of amino acids, vitamins and mineral content available on request

Write for descriptive booklet!

A product of Pacific Processing Corporation

Distributed Exclusively by

SELEY & CO.

Statler Center – 900 Wilshire Blvd., Los Angeles 17 – MUtual 1371

ior to 23%. When the diet contained 880 or 975 calories per pound, both growth and feed efficiency were improved by increasing protein to 29%. The optimum protein-energy ratio was different for diets with different levels of protein. For the 29% protein diet, best growth and feed efficiency were obtained with a ratio of 1:33.5. For the 26% diet, the ratio was 1:37.5, and for 23%, the optimum ratio for best growth was 1:34, but for best feed efficiency about 1:42.

In work with chickens, experiments have indicated a sparing effect of pantothenic acid and vitamin B_{12} in diets of breeder hens, Dr. Balloun said. With low pantothenic acid diets, if the diet was also low in B_{12}, noticeable pantothenic acid deficiency symptoms were observed in the chicks; if B_{12} was adequate, the pantothenic acid deficiency was not as acute.

In two experiments with chicks, no benefit was derived from feeding proteolytic enzymes. Evidently, Dr. Balloun said, the chick has, at hatching time, a well developed proteolytic digesting system.

DAIRY NUTRITION: A report by Dr. Norman L. Jacobson of Iowa State on dairy nutrition studies included information on experiments on the prevention of bloat in cattle.

In some studies, detergents have been used and have had some effect, but large amounts were needed, Dr. Jacobson said.

Work with penicillin, fed in capsule form, 75 milligrams per day, has been variable, he said, and no conclusions have been drawn. In severe bloat, penicillin did not bring a marked reduction, according to Dr. Balloun.

Included in the pasture work is use of water-dispersible oil in the drinking water. Dr. Jacobson said this markedly reduced bloat or, if the animal received enough, eliminated the bloat.

He recommended caution in considering the results but indicated that the findings provide helpful information and a tool for further work. More information is needed, especially on economic aspects.

In the trials, about 1 lb. per day of the oil was being fed.

Calf Feeding

Discussing dairy calf feeding, Dr. Jacobson outlined an "economical, efficient calf-raising program." He described good milk replacers as high in protein (about 20%), low in fiber (2 to 3%), high in energy and palatable. He said fats are a valuable source of energy for milk replacers, and he suggested that a level of about 10% is desirable to help raise the energy to a satisfactory level.

Dr. Jacobson described good calf starters as moderately high in protein (at least 16%), relatively low in fiber, coarse and granular in consistency, and palatable. He said molasses in the ration makes the calf eat better and helps it shift better to a ruminant status. He suggested inclusion of 12-20 mg. of antibiotic per pound.

Dr. Jacobson went on to urge more consideration of the development of satisfactory, more economical veal rations. He said this area of calf feeding has been neglected.

He noted that limited milk and milk replacement programs are not satisfactory for veal production because they do not supply enough energy. Large amounts of feed are needed for veal production. Present systems, he said, are inefficient, with whole milk fed in large amounts.

RADIOACTIVE TRACERS: A "golden future" for the use of radioactive isotopes in livestock nutrition studies was foreseen by Dr. R. Scott Allen, biochemist at Iowa State.

Dr. Allen demonstrated work being done at the Iowa State dairy husbandry laboratory with radioactive phosphorus in study of the nutritional needs of young calves. He reported preliminary results from these studies and pointed to significant results found in radioactive studies in other places.

As an example, it has been possible to determine maintenance requirements for calcium in cattle, sheep and swine.

The method of study is accurate and can give conclusive results, Dr. Allen said. It also can be of marked benefit in any effort to learn about absorption and distribution of various elements taken into the body in feed.

Short-lived radioactive materials, such as copper, can provide a check on whether a given feed mixture is thoroughly mixed.

Other uses, he said, will be found in studying the growth rate of bones, estimating rates at which animals assimilate various nutrients, the extent to which feed taken by the dam is transmitted to her unborn offspring, the fate of drugs given to animals, functioning of certain glands, studies of immunization, movements involving antibodies and antigens in the body, etc.

DRUGS IN FEEDS: Development of the use of drugs in feeds was traced by Dr. D. F. Green, nutritionist with the Nitrogen Division, Allied Chemical & Dye Corp., New York, in a talk entitled "Magic Bullets in the Feed Bag."

The day of magic bullets (a term coined early this century when man first made progress in manufacturing chemicals to overcome diseases) in the feed bag is here and has been with us for about a decade, Dr. Green pointed out. To have 22 drugs developed and put to use on farms in this short space of time is really phenomenal, he observed.

Dr. Green outlined the development of various types of drugs in feeds, beginning with sulfaquinoxaline, which "started the parade of magic bullets in the feed bag." He went into the broader aspects of drug use, showing how feed men got into the medicated feed business. He also mentioned the importance of various nutritional substances in improving feeding results.

Management, Sanitation

Dr. Green emphasized that "while we have come a long way in the past 10 years, there are still unknown aspects to be understood and educational work to be done. None

there's no room for doubt with...

hetrogen K PREMIX

IT'S ALWAYS THE AMOUNT YOU NEED...
BECAUSE IT'S PACKAGED TO YOUR SPECIFICATIONS

You don't have to worry about waste or careful weighing with Hetrogen K Premix. Just empty contents of container into your feed batch, mix and your rations will have an adequate amount of effective vitamin K for the prevention of hemorrhagic disease.

HETROGEN K PREMIX SUPPLIES THE MISSING VITAMIN K TO YOUR POULTRY RATIONS.

WATER SOLUBLE

RAPIDLY ABSORBED

LOW COST... Can be added to poultry feeds at a cost of only 10¢ or less per ton.

HETROGEN K is also available as a free flowing powder containing 63% equivalent of Menadione Sodium Bisulfite, U.S.P. One-quarter lb. of the Premix or just one gram of the free flowing powder is added to each ton of finished feed for maximum protection against hemorrhagic disease!

FOR FURTHER INFORMATION ABOUT OUR INDIVIDUALIZED PACKAGING, TAILORED TO YOUR SPECIFIC NEEDS,

WRITE, PHONE OR WIRE COLLECT

HETEROCHEMICAL CORPORATION
111 EAST HAWTHORNE AVENUE, VALLEY STREAM, NEW YORK
LOCUST 1-8225

for the
FEED INDUSTRY

- Chemical Analyses
- Vitamin Assays
- Drug Assays
- Spectrographic Analyses
- Chick Feeding Tests
- Consultation
- Formula Reviews

Write for Schedule of Charges

FEED SERVICE DIVISION
LIME CREST RESEARCH LABORATORY
R. D. 1, Box 67 Newton, New Jersey

LIMESTONE PRODUCTS CORP. OF AMERICA

Model 400G
Steinlite
60 Second Electronic
MOISTURE TESTER

- Easier to Operate
- More Accurate
- Faster

Backed by 20 YEARS Of Research and over 20,000 Successful Installations

Wherever moisture is a dollar-important factor, either in buying and selling or in processing and storing commodities, the Steinlite 400G has the reputation of being the most popular and practical Moisture Tester available. Write today for full information. Find out how the New 400G's faster, more accurate and simpler operation can save you time and money.

"World's Leading Supplier of Grain Testing Equipment for Over 40 Years"

SEEDBURO
(SEED TRADE REPORTING BUREAU)
EQUIPMENT COMPANY
Dept. FS-9, 618 W. Jackson Blvd., Chicago 6, Ill.

of us can know too much about our problems, which range from careful manufacture of feeds containing drugs for specific purposes, the limitations of these drugs, proper methods to use medicated feeds and the many abuses that farmers can devise by neglecting management and sanitation."

In connection with his comments on advances in drug use and nutrition knowledge, Dr. Green noted how the number of pigs saved per litter has increased from an average of 5.24 in 1924 to about 7 now. Various factors enter into this, but the improvement is obvious. In recent years, a further improvement has come at the same time as important feeding advances, which may have contributed to the gain.

Continuing, Dr. Green said: "When feed manufacturers add the man-produced vitamins, drugs and sources of protein to feeds, they are putting a variety of magic bullets in the feed bag. All these magic bullets can and should be used appropriately to produce the best feed possible, but we must continue to remind farmers that the magic bullets in the feed bag are not a substitute for the 'magic of common sense'—the application of breeding, feeding and management procedures that have been painfully learned during centuries of trial and error and several decades of controlled studies."

MATERIALS HANDLING: The methods of handling feed have been improving more slowly than nutritional improvements, said Dick Hanson, executive editor of Successful Farming. He spoke and presented a film strip on a "new farm science," materials handling on the farm, showing how efficiency in materials handling can be stepped up with new methods and equipment.

There is much to be done in this field, he said, with many farms needing improvement.

Mr. Hanson said people in the feed industry will have much to do with how materials are handled on the farm.

Possibly, he said, feed may even be changed in physical form to expedite handling on the farm.

Another feature of the Iowa conference was a presentation by two Iowa State rural sociologists on "How Farmers Adopt New Ideas." The speakers, Dr. J. M. Bohlen and Dr. G. M. Beal, dramatically presented the results of various studies showing how farmers learn of new ideas and eventually adopt them. They have made this presentation at a number of major meetings recently.

Wonderful Opportunity for

ADVERTISING COPYWRITER

with Feed Experience

Unusual future for growth in responsibility as account manager and increasing earnings with profit sharing incentive plan. Agency experience not essential. Must know feeds and feed merchandising. Send samples, picture and complete personal resume. N. A. Winter Advertising Agency, 12th Floor, Paramount Bldg., Des Moines, Iowa.

CHAMPION

MILL AND MIXER UNITS

CHAMPION *PERFORMANCE • CAPACITY • DEPENDABILITY*

provides your customers with *complete* ON-THE-FARM grinding and mixing service. These CHAMPION features will increase your tonnage at a lower cost per ton:

- **FAST, COOL, UNIFORM GRINDING**
- **LARGE CAPACITY** • **ACCURATE MIXING**
- **SMOOTH MOLASSES BLENDING**
- **COMPLETELY EFFECTIVE MAGNET CONTROL**
- **SIMPLE, CONVENIENT ONE-MAN OPERATION**
- **PLUS—THREE-DAY MOBILE UNIT FIELD TRAINING BY CHAMPION ENGINEERS**

You can pay more money, but you can't buy better feed grinding and mixing equipment!

CHAMPION PORTABLE MILL CO.
2109 COMO AVENUE SOUTHEAST • MINNEAPOLIS 14, MINNESOTA

SINASON - TEICHER INTER AMERICAN GRAIN CORP.

EXPORTERS

GRAIN
FEEDS
FLOUR

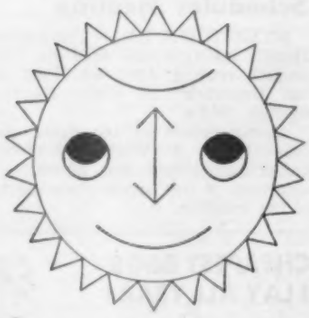
Wire Us Your Offerings

Telephone HAnover 2-8690

Teletype NY 1-3286

New York Office—50 Broadway

The tragic fact, our doctors tell us, is that every third cancer death is a needless death... *twice* as many could be saved.



LET'S LOOK AT THE BRIGHTER SIDE

Many thousands of Americans are cured of cancer every year. More and more people are going to their doctors *in time*...To learn how to head off cancer, call the American Cancer Society or write to "Cancer" in care of your local Post Office.

American Cancer Society

Experiment Station Transferred to USDA

WASHINGTON — Supervision of federal research activities at the Squaw Butte-Harney Experiment Station near Burns, Ore. has been transferred (effective July 1) from the Department of Interior's Bureau of Land Management to the Agricultural Research Service of the U.S. Department of Agriculture.

Research at this station, conducted cooperatively by USDA and the Oregon Agricultural Experiment Station, is designed to aid the range cattle industry of the Pacific Northwest. The research program includes: (1) improvement of beef cattle through breeding, management, and nutrition; (2) increasing the quantity and quality of range forage through reseeding, brush and weed control, range management, and range use; and (3) improvement of quality and quantity of hay produced for range livestock on wild flood meadows through use of fertilizer and good management practices.

Previous research at the station has resulted in extensive seeding of sagebrush-bunchgrass-type range land, after killing the sage with chemical sprays. On less depleted rangelands, native grasses can often regain high productivity if the competing sagebrush is killed. Station studies have led also to use of commercial fertilizer (both phosphorus and nitrogen) for improving the yield and quality of flood-meadow hay, and to the use of protein supplements to improve livestock nutrition, both during the winter and summer.

ADM Holds Sales Training Clinic

KANSAS CITY—A special three-day sales training clinic was conducted for some 30 Archer-Daniels-Midland Co. feed salesmen and sales personnel recently at the Phillips Hotel, Kansas City.

The meeting was held for ADM's Southwest formula feed division. Attending were salesmen from Missouri, Arkansas, Mississippi, Texas, Oklahoma and Kansas. Company personnel from ADM's Minneapolis and Kansas City sales offices outlined a new program for promoting dealer relations, with special emphasis on aiding dealers in customer resale work. Latest developments in research, new product information, feeding trends, advertising and promotion plans were also discussed.

All salesmen took an active part in the program by participating in a "Brainstorming Session," designed to develop new sales techniques through the exchange of experiences in the field and ideas.

Richard Angle, Southwest division sales manager, presented a gold-plated plaque for outstanding sales achievement to LeRoy Dameron, Springfield, Mo. Mr. Dameron exceeded his sales quota by the largest percentage to win a year-long contest and the plaque.

Thomas V. Martin

Firm Forms Division to Market Mineral Feed

SAN FRANCISCO—A new mineral feed supplement will be offered nationally about Nov. 1 under the label "Victory Brand."

The Flexiform Engineering & Mining Co., Inc., headquartered in San Francisco, will manufacture a concentrate composed primarily of 26 natural mineral oxides for adding to animal and poultry feed.

The Flexiform Company, founded in 1950 by W. F. Handel and William P. Smith, has spent the first six years of its life dealing in mining properties and the extraction of minerals from the soil. Within recent weeks a feed division has been established, and Thomas V. Martin has been named vice-president in charge of this new division. The mining activities continue unchanged.

Mr. Martin, a biologist, has been secretary-treasurer of the Hurricane Equipment Co., a position he continues to hold, has taught in the biology department of the University of Washington, Seattle, and has been associated with fish and shell fish canning plants in the Northwest for many years.

A plant has been constructed near San Diego to produce the new concentrate at the rate of 200 tons a day. Carl Lewinson, a mining engineer, is manager of the plant. Mr. Handel is president of the company and Mr. Smith is secretary-treasurer. Main offices are located at 681 Market street, San Francisco.

Animal Health Group Schedules Meeting

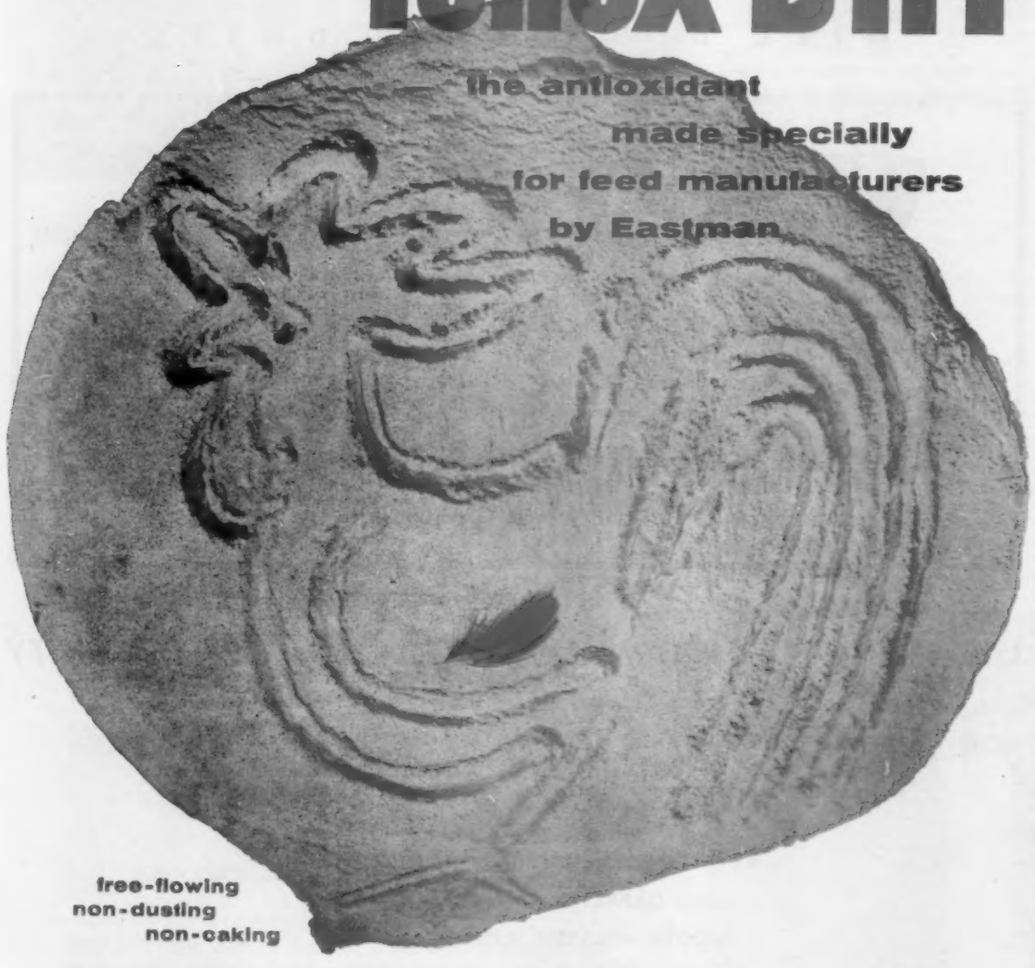
MYERSTOWN, PA. — The Animal Health Institute will hold its 17th annual meeting April 4-6, 1957, at the Greenbrier in White Sulphur Springs, W.Va.

Announcement of the dates was made by C. W. Whitmoyer, Whitmoyer Laboratories, Inc., Myerstown, chairman of the publicity committee of the institute.

Tenox BHT

AGRICULTURAL GRADE

the antioxidant made specially for feed manufacturers by Eastman



free-flowing
non-dusting
non-caking

Before developing Tenox BHT-Agricultural Grade, Eastman consulted many people in the feed industry, to discover exactly what they wanted in an antioxidant for poultry feed. We asked them about their storage problems... we studied their blending machinery and methods... we asked their advice on the best particle size.

Using this information, coupled with our knowledge gained through years of experience in food antioxidants, we developed the new Agricultural Grade of Tenox BHT, designing it specifically to meet the needs that were expressed to us.

As a result, Tenox BHT-Agricultural Grade is supplied as free-flowing, non-dusting powder, in a particle size comparable to that of other feed components. It blends rapidly and homogeneously in mixing operations, and does not separate during handling or storage.

Tenox BHT-Agricultural Grade improves pigmentation, protects the vitamin content of your feed, and safeguards poultry against deficiency diseases such as encephalomalacia. To poultrymen, this means bringing more chicks to faster and more profitable maturity.

Since this is a new form, especially prepared for feed use, be sure you specify Agricultural Grade when ordering. For additional information concerning Tenox BHT-Agricultural Grade, write to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; New York City; Framingham, Massachusetts; Cincinnati; Cleveland; Chicago; St. Louis; Houston. West Coast: Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

CHEAPEST EGGS I LAY ALL YEAR!

The EXTRA eggs resulting from adding EGGSHELL BRAND OYSTER SHELL to all-mash or mash-grain diets may cost as little as 2 pennies a dozen! Insist on EGGSHELL BRAND for the calcium-food that's soft, digestible and odorless.

SOUTHERN OYSTER SHELL MILLING CORP MOBILE, ALABAMA

Government Is Today's Biggest Threat to Marketing System

By EZRA TAFT BENSON
Secretary of Agriculture

EDITOR'S NOTE: *Secretary Benson, in his appearance at the 75th anniversary dinner of the Minneapolis Grain Exchange, delivered a strong denunciation of government interference in private business, particularly in the matter of grain handling. He reviewed the political situations which resulted in making the Commodity Credit Corp. in a sense "the biggest grain market in the world" and forcefully described the necessity for correcting the situation. The accompanying article is the text of his address.*

v v

Of all the great cities of the U.S., few are more closely and profitably bound to agriculture than Minneapolis and St. Paul. Here is the gateway to the great Northwest. Here is the service center of a vast agricultural empire. Out of the Twin Cities flow machinery, fuel, goods and services to meet farm needs in one of the biggest farm trading areas of the U.S. Into these same Twin Cities flow dairy and poultry products, grain and livestock from the Great Lakes to the Rockies and from the corn belt to the Canadian border.

It was largely to meet the need for farm markets that the Twin Cities were established.

The pioneering spring wheat production in this area marked the beginning of Minneapolis as a grain market. Commercial flour milling developed at the Falls of St. Anthony. As spring wheat production spread rapidly into the open prairie, a flood of wheat poured into Minneapolis—more than could be handled even by the rapidly-growing milling industry.

Marketing facilities and practices, local and regional as they were, proved inadequate. An organized market was needed—a market where carload grain shipments could be bought and sold openly and competitively, according to recognized rules. And so, in 1881, 75 years ago, the Minneapolis Grain Exchange was established. I congratulate you on your 75th anniversary, and I look forward with you to many more years of service to American agriculture.

Never a Default

The Department of Agriculture and the Minneapolis Grain Exchange have a common objective: it is good marketing, efficient marketing. For more than 33 years futures trading on this exchange has been under the supervision of the USDA Commodity Exchange Authority. In all this long period, there has never been a single default on a Minneapolis grain futures contract. This is indeed a laudable record. The exchange may well be proud of it.

Agriculture has been harmed in the past by manipulative practices of our markets. Agriculture has been harmed by well-intended but uninformed public interference with markets. The Minneapolis Grain Exchange has struck against both of these evils. On one hand you have cooperated with the USDA Commodity Exchange Authority to enforce improved trading practices. On the other, you have aided a campaign to teach the public the facts about our marketing system. Again I congratulate you. I am firmly of the opinion that we cannot have a free, private marketing system unless we understand it. I have great confidence in the soundness of informed public opinion.

Yours is a big market. Your records show 325 million bu. of grain handled last year. The reports and publications of your exchange proudly proclaim Minneapolis "The World's Largest Cash Grain Market."

But, I am sorry to say, I am connected with an even bigger grain market, the biggest grain market in a certain sense, in the world—CCC. Last year CCC acquired about 700 million bu. of grain—more than twice as much as was handled by the Minneapolis Grain Exchange. During the past year 90% of our wheat export sales consisted of CCC stocks. I say to you that I am sorry that this is so. I do not want to see government dominate markets. Government should not be in business or in competition with its tax-paying citizens. As a nation we should leave to private enterprise those things which private enterprise is willing and able to do. I believe that continued sub-

FISH SOLUBLES
LASSEN PROCESS
CANADIAN & FORTIFIED
R. S. WILSON CO.
1206 MAPLE AVE.·LOS ANGELES 15, CALIF.

More and More . . .
Feed Mills Are using
More and More
Stabilized ANIMAL FATS
and MEAT PROTEINS
Find Out Why . . . WRITE
NATIONAL RENDERERS
ASSOCIATION
Organized in 1933
30 N. LA SALLE ST.
CHICAGO 2, ILL.
Phone FR 2-3289

"Here's one feed product we can't grow!"

THERE'S PROFIT IN STERLING BLUSALT EVERY DAY— BECAUSE IT'S FED EVERY DAY

Salt with trace minerals added—Sterling Blusalt—is one feed product farmers don't raise themselves. They have to buy it from feed dealers—and buy it *all year round*—to give their livestock salt and needed protection against trace-mineral deficiencies. What's more, Sterling Blusalt is important on *every* livestock farm in your area. So when you handle Sterling Blusalt, you're assured of steady sales and profits . . . day after day after day.

With Sterling Blusalt, the farmer can also help protect his livestock profits every day in the year. Fed free choice and mixed in custom feeds, Blusalt guards animal health and production—helps provide higher returns in milk, meat, or wool. That's the big reason so many farmers are becoming repeat customers for Sterling Blusalt.

P.S. Your customers are hearing more and more about Sterling Blusalt in a big new "Fun-on-the-Farm" advertising campaign in major feeding areas. Ask your Sterling representative about tie-in possibilities.

• Blusalt is available in 50- and 100-lb. bags, 50-lb. blocks and 4-lb. Liks. Fits *any* feeding program.

Sterling Blusalt is salt plus iodine, cobalt, copper, iron, manganese, and zinc. These trace minerals are stabilized to assure full strength . . . in amounts determined by leading animal nutritionists.

STERLING TRACE MINERAL **BLUSALT**—*Product of International Salt Company, Inc.*

NEWS
... from the laboratories of Dr. LeGear

A New Rumen Inoculum to IMPROVE YOUR CATTLE FEED

... INCREASE YOUR PROFITS

Easy To Custom Mix ... Gives Cattle

- FASTER WEIGHT GAINS
- BETTER DIGESTION

DR. LEGEAR'S BOVEXTRA

Proper rumen function gives cattle full feed utilization with no digestive upsets. That's the job BOVEXTRA does. BOVEXTRA supplies billions of bacteria to the rumen where they go to work aiding digestion and turning feed into valuable meat and milk. Weight increases are fast with little danger from many types of scours.

CATTLE GO FROM RANGE TO FULL FEED IN 8 TO 12 DAYS

When cattle are switched from a grass diet to grain, the conversion can be made swiftly and safely with BOVEXTRA. Just mix BOVEXTRA in the feed and within 8 to 12 days the complete change-over is accomplished. This cuts 3 to 4 weeks off marketing time and permits uniform marketing since slower cattle fatten at a faster rate.

DOMINANT EDUCATIONAL and ADVERTISING PROGRAM

Every month readers of publications like MIDWEST FARM PAPERS, HOARD'S DAIRYMAN and PROGRESSIVE FARMER will read about BOVEXTRA. In addition, an aggressive sampling and educational program is being directed to farmers of the future and other farm groups.

BULK MIXING IS FAST AND EASY

3 lbs. of BOVEXTRA is recommended for a ton of feed. This may be added to your special formula or mixed with commercial feed to improve the rumen function and aid digestion. Where mixing facilities are not available BOVEXTRA may be sold to be spread on top of feed or added to agitated drinking water. Watch BOVEXTRA produce results . . . cattle put on top grade finish in less time bringing higher market prices for the feeder.

For Dairy Cattle ... NU-CUD

This scientifically developed rumen inoculum supplies the bacteria to bring dairy cattle to top condition and keep them there. With proper rumen function, milk volume improves, better feed utilization occurs and digestive disorders definitely are reduced. NU-CUD gives calves a cud in 3 to 4 weeks permitting safe, early grain feeding.

NU-CUD and BOVEXTRA are available in ½ lb., 2 lb., and 20 lb. packages.

For 65 years ethical manufacturers of dependable animal health remedies.

Dr. LeGear Medicine Company • 4161 Beck Avenue
St. Louis 16, Missouri

____ Please send full information on

____ BOVEXTRA ____ NU-CUD

____ Please have salesman call.

Name _____

Firm _____

Address: _____

City _____ State _____

DR. LEGEAR MEDICINE CO.
ST. LOUIS 16, MISSOURI

stitution of government for private trade would mean, in time, the socialization of agriculture and the end of freedom as you and I know it.

CCC in its price support operations, has become the "market" for a wide variety of food and fiber that no one else seems to want very badly. CCC's ability to acquire these commodities, and to keep on acquiring them, is so extensive it staggers the imagination. When its bins and warehouses become filled, still more storage space is provided. When CCC begins to run out of money, either its notes are cancelled or its borrowing authority is extended.

Twenty years ago the maximum borrowing authority of CCC was $100 million. Today it is $14.5 billion —145 times as much as in 1936.

That tells the story of how government has moved in. CCC has in ownership or under loan nearly a billion bushels of wheat and more than a billion bushels of corn. Its investment in corn as of June 30, 1956, was nearly $2 billion; its investment in wheat nearly $2⅔ billion. At the close of the 1956 fiscal year, CCC owned nearly $6 billion worth of farm commodities, and it had loans out on over $2¼ billion more.

Biggest Threat

The biggest threat today to our private marketing system is government itself because we have not applied ourselves fully to make the voluntary process of free enterprise work as it should. We are permitting government to become the dominating force in our economy, when in reality it should play a secondary role, helping private enterprise do a better job and providing adequate safeguards to stimulate desirable action.

As a nation we have gotten ourselves into our current, almost unbelievable surplus situation primarily because many of our people believed, or at least hoped, that an act of Congress could brush aside fundamental demand and supply relationships. Legislative action does not nullify economic laws. Prices are not made in Washington. We set out to legislate price at artificial levels without effective measures to maintain consumption rates or to curb production increases. We shackled price as an economic throttle and provided no substitute regulation other than governmental controls on a few commodities. In most cases these proved to be too lenient and too late. We continued this system of wartime price manipulations long after the war emergency had ended, with the result that we now have the unprecedented surpluses of farm products in the hands of government.

The free marketing system will be in danger if government price manipulation continues to grow. It is now within the power of government, either wittingly or unwittingly, to place economic pressure on whole groups of producers and distributors. Through its pricing and sales programs government can shrink or expand consumption. It can squeeze consumers out of the market or bring new consumers in.

A government heavily involved in commodity ownership can easily by-pass the private marketing system. The present administration in Washington has repeatedly demonstrated its determination not to by-pass the private marketing system. We believe in our free enterprise system, yes, our capitalistic system.

As you well know, we have encouraged the trade to propose ways to relieve us of merchandising activities which interfere or compete with private business. The trade has responded. Whenever feasible we have adopted these proposals.

In disposing of CCC stocks of grain determined to be out of condition or in danger of going out of condition, the trade has been used to the maximum possible. Such grain has been offered the trade at the primary assembly points.

You are also well aware of the steps our administration took to use established trade channels in distributing feed supplies to farmers and ranchers in drought-stricken areas.

We have acted to minimize the conflict between government activities and the private grain trade in marketing of exports. I repeat that about 90% of our total wheat export sales in the past 12 months or so have consisted of CCC stocks. We are deeply concerned. We encouraged the grain trade to suggest ways for the department to use private marketing system facilities in its wheat export operations.

With leadership supplied by the Minneapolis Grain Exchange, the trade came forward with a proposal that exports be made from free market supplies rather than from government-owned stocks. The gap between supported domestic market prices and the world price of wheat would be bridged by a subsidy paid in wheat. We examined this proposal carefully and decided it had real merit. The proposal was put into effect on Sept. 4. It provides that the private grain trade, instead of the government, will have primary responsibility for handling wheat exports. We appreciate the helpful counsel of the Minneapolis Grain Exchange.

It is in a very real sense your pro-

KEES & COMPANY
Processors of DRIED FISH SOLUBLE PRODUCTS
A "MUST" IN EVERY SWINE OR POULTRY RATION
Call or write for complete information and price
327 S. La Salle St., Chicago 4, Ill. Phone HArrison 7-1528

GOLDSBERRY
PROVED IN SERVICE

FASTEST AND CLEANEST FEED DELIVERY	√
SUBSTITUTES MOTOR POWER FOR EXPENSIVE MAN POWER	√
CUTS LOSSES FROM SACK DAMAGE, PESTS, RODENTS	√
DELIVERS DAIRY AND POULTRY FEEDS ON SAME TRIP	√
FEEDS STAY FRESHER MORE PALATABLE	√
INCREASES MILL CAPACITY AND PROFITS	√
ATTRACTS AND HOLDS PROFITABLE NEW BUSINESS	√
TANK TOP DELIVERY TO HEIGHTS UP TO 18 FT.	√
ELIMINATES SACK PILING, STORAGE AND SEWING	√
UP TO 1000 LBS. LIGHTER IN WEIGHT	√
SELF-CLEANING PADDLES PROVIDE FASTEST CLEANOUT	√

GET THE PROFIT-MAKING FACTS—

FOOD MACHINERY AND CHEMICAL CORPORATION
MATERIALS HANDLING SECTION
RIVERSIDE, CALIFORNIA

Tank Top
DELIVERY INTO STORAGE AS HIGH AS 18 FEET

GOLDSBERRY
BULK FEED SYSTEMS

HAVE UNIQUE PADDLE SYSTEMS FOR SPEED WITHOUT PACKING

Of the score or more profit-making features of the Goldsberry bulk delivery systems of poultry and dairy feeds, the one with the biggest appeal is its top-tank discharge. The "stinger" or discharge member is easiest to manage by the driver, delivers to bins or other storage as high as 18 feet. As for speed, Goldsberry will discharge feed at rates up to a ton in 90 seconds! To the advantage of tank-top delivery and fastest cleanout add the plus of light weight. An aluminum Goldsberry bulk feed delivery unit weighs up to 1000 pounds less. Operating costs pay for payload, not for dead weight. Let us show you how to *go with Goldsberry*, on the profit road to faster delivery of both dairy and poultry feeds. A new descriptive bulletin brings you the complete sales-winning, money making story. Just mail the coupon for your free copy.

MH455

MAIL COUPON FOR BULLETIN

FOOD MACHINERY AND CHEMICAL CORPORATION
MATERIALS HANDLING SECTION • RIVERSIDE, CALIFORNIA

Please send Goldsberry Bulk Feed Systems Bulletin

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

FISH MEAL · FISH SOLUBLES
LIVER MEAL—VITAMIN OILS
FEATHER MEAL—FEED INGREDIENTS
ALBUMINA SUPPLY CO., INC.
2 Broadway, New York 4, N. Y.

Serving the Milling Industry A Complete Line of Quality Grain Processing Machinery for Over a Century.
BARNARD & LEAS Manufacturing Company INC.
CEDAR RAPIDS, IOWA

FOR
BEST SERVICE
ON
VITAMINS A & D
ALL TYPES — ALL POTENCIES
PLUS
PREMIXES
Call

RUDY ESCHENHEIMER COMPANY

BOX 147
CHILLICOTHE
MISSOURI
PHONE 1047

Serving the
Feed Trade
For Over
20 Years

gram and you deserve a great deal of credit for your efforts. If it proves successful, the principle is valid with respect to other commodities. Changes may be required, of course, in the light of experience, but I assure you we will do everything possible to make this program a big success. We are sold on it.

Together with other steps we are taking this action will do much to restore free market machinery. One of these other steps is the establishment of a Soil Bank to reduce our surplus stocks, to improve income and to convert to grass and tree lands not now needed for crop production.

It is often said, especially in Minnesota, that the Soil Bank is really a proposal of our opponents, belatedly endorsed by the administration.

Soil Bank History

This is not the fact. The Soil Bank legislation enacted had support from both sides of the aisle. It is bipartisan legislation.

The history of the Soil Bank in this regard is simply this: A senator prominent in this state offered a soil bank bill in 1955. We would not accept that bill. We could not accept it for many reasons. We could not accept a soil bank that callously disregarded farmers' problems; we could not adopt a soil bank that would only force farmers under more controls.

We carefully analyzed about 20 soil bank proposals while developing the one the administration proposed to the Congress.

The truth is: The senator's proposed soil bank offered no protection for the acreage allotments of participating farmers. Our soil bank provides full protection for allotments.

The truth is: The senator's soil bank offered no protection for the rights of tenants. Our soil bank does.

The truth is: The senator proposed a compulsory soil bank. Farmers would have been required to participate as an essential condition for price supports. Our soil bank is voluntary.

The truth is: The senator's soil bank would have required all farmers to put in the same percentage of their cropland. In plain words it would have created special hardships for small farmers. Our soil bank gives full and favorable consideration to the problems of small farmers.

The truth is: The senator's soil bank would not have operated to reduce production of the crops in greatest surplus. The acreage reserve of our soil bank is focused directly on the most serious surplus problems.

To restrict production is unpalatable to farmers and bitter as gall to me, even for a cause as important as the elimination of surpluses, but since it must be done before surplus accumulation still further damages the economic position of farm families, a voluntary soil bank is better than compulsion, a soil bank pointed specifically at the surpluses is better than one that ignores them, and a soil bank set up for a specified number of years is much to be preferred over one that would go on indefinitely.

The basic difference between our approach to farm problems and that of our opponents is this: They would force adjustments in individual farm operations to fit an arbitrary program. We would adjust the program to the needs of the individual farm.

The differences are clear, also, in the agricultural planks of the two party platforms: They chart two widely different courses for American agriculture. Frankly, I say to you that the agricultural legislation of the past 3½ years has been largely bipartisan.

Far-seeing men from both sides of the political aisle have supported sound measures.

But we are now at a time of decision. Will we go back to discredited, bankrupt programs of the past that did not protect farm prices and incomes from serious decline, that brought only controls and grief and economic hardship to farm families?

Or, will we go forward with constructive programs that will bring to farmers the maximum market opportunities and the maximum level of farm income?

Will we bring farmers under bureaucratic control, or go forward with an expanding, free, and correspondingly more prosperous agriculture?

The farm plank adopted by our political opposition at their Chicago convention presents no new or forward-looking issues. It is not so much a platform as it is a pile of used lumber.

Two of its most important provisions have already been whipped—mandatory supports at 90% of parity and the Brannan Plan.

First, let me comment on the Brannan Plan. Such a program would allow the prices of farm products to seek their own level in the market, with the taxpayer then making up the difference to farmers between the market price and some predetermined guaranteed price.

When Mr. Brannan offered his plan in 1949 he was asked what the program would cost. Analysts in USDA made a study at that time to esti-

VAN DUSEN HARRINGTON
DIVISION
F. H. Peavey & Co.
GRAIN SOYA BEANS FLAX
Founded 1852
MINNEAPOLIS Pv DULUTH

UNEQUALLED IN HIGH CAPACITY
...RUGGEDNESS...LOW MAINTENANCE

SPROUT-WALDRON
ATTRITION MILLS
with the Big Plus

For grinding free-flowing grain into feed meal, you can't beat Sprout-Waldron Attrition Mills. They've been the acknowledged champs since the Gay Nineties and can outmatch all competition in high output per horsepower . . . low maintenance costs . . . total tonnage per dollar . . . and in the ability to put it out and take it 16 to 24 hours a day year after year.

You can buy other types of grinders for less money, but none that will last as long or grind as much at as low a cost. Sprout-Waldron Attrition Mills are available in many different sizes from 5 to 500 h.p. Most styles are fitted with either belt or motor drives. And there's a Sprout-Waldron plate for every purpose. Write for Bulletin 144.

Sprout-Waldron's BIG PLUS assures you of expert engineering guidance on installation . . . plus finest workmanship and service . . . plus 100% reliability . . . at no extra cost.

PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS • MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS BUCKET ELEVATORS • CUTTERS, CRUSHERS, AND FEEDERS • REELS, SEPARATORS, AND • ASPIRATORS BULK FEED TRUCKS • A. O. SMITH PERMAGLAS STORAGE UNITS BUHLER BROTHERS FLOUR MILLING EQUIPMENT

SPROUT-WALDRON
The Best in Milling Equipment Since 1866
61 LOGAN STREET • MUNCY, PA.
Exclusive Canadian Distributors: Strong-Scott, Limited, Winnipeg

SW
FE/448

mate the cost. It proved to be so great it was never made public.

We have now repeated and updated this study in the light of current conditions. We find that to assure prices for major agricultural commodities at 90% of parity, not on everything the farmers might produce, but on only the 1951-55 volume of production, using the Brannan technique, would cost $5.4 billion a year. Adopting the Brannan Plan would mean farmers would get almost half of their net income from the government in exchange for which they would be subjected to production quotas, policing and penalties.

I may say that this estimate was made by substantially the same people who made Brannan's earlier, undisclosed cost estimate. It checks well with the actual experience of Great Britain, where a Brannan-type program is in operation. It checks with an independent study of prospective costs in America made by Professor George Brandow of the Pennsylvania State University, which study won an award from the American Farm Economic Association for its outstanding merit.

Well-meaning persons have supported a Brannan-type program in the mistaken belief it would return free markets for farm products and greater freedom for farmers to produce. Unfortunately it would have no such results.

Socialized Agriculture

Compensatory payments, broadly applied, would result in a frankly socialized agriculture. The added income poured into agriculture would soon stimulate production far beyond any responsible estimate of need. Payments above the market level obviously could be paid only upon limited quantities rather than upon all that farmers receiving such payments would like to produce. This would mean a necessity for annual quotas for each commodity covered (probably on a quantity rather than an acreage basis). National quotas would have to be divided by states and counties, right down to individual farms. Freedom would be gone, and farmers would be reduced to a government dole. I do not know how farm families could more easily or quickly become wards of the government. Nor do I know how the direct payments could be put into effect without provisions that would have these results.

I certainly would not want to be responsible for establishing this kind of future for agriculture. No secretary of agriculture ever should become the director of rationing—the rationing of opportunity—in agriculture.

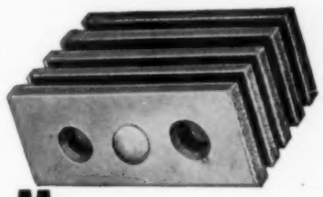
Second, a direct payment program would make agriculture a closed business into which entry would range only from difficult to impossible. The rights to produce under such a program would have to be closely restricted to avoid upsetting the annual quota that could be marketed. Thus, new producers would find quotas hard to obtain. This would be a serious matter when extended to all major farm products.

And third, the windfall earnings that would result from payments above the market price would shortly be capitalized into farm-land values. They would become a cost to the young farmer who thereafter would be buying a farm. Again, I would not want to be a party to thus burdening our future generations of farmers.

Direct payments could be put into effect and their more serious consequences for farmers would not show up until a year or two later. This, of course, makes such a program politically appealing. But neither this administration nor anyone of integrity could approve for immediate

EARLY METHODS

for grinding grain were slow, arduous jobs, often powered by human energy. An ingenious device was this foot-driven pestle which pounded whole grains to bits in a stone mortar. The end result was crude and uneven with hull and chaff mashed in with the meal.



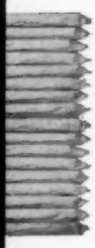
MODERN WAY TO GRIND

is to use efficient, high-speed rotary hammermills equipped with Pacal Hard-Faced Hammers—the hammers that grind 3 to 4 times longer with quality granulation every time!

Phone Midway 6-9456

or write Hammer Department

PAPER-CALMENSON & COMPANY County Road B and Walnut St., Adjoining Hwy. 36, St. Paul 8, Minn.
Duluth, Minnesota • Billings, Montana



stacks solidly! easier to grip!

Thousands of tiny interlocking grooves are pressed into the tough kraft outer-wall of the new Cromwell STAK-GRIP bag . . . by an embossing process originated by Cromwell. Result: *built-in* two-way slip-resistance with no reduction in strength!

In over a year of actual use, the Cromwell STAK-GRIP bag has proved these oustanding advantages:

1. **cuts breakage losses** due to slippage.
2. **increases safety** because bags stack solidly.
3. **helps sales** because both dealers and farmers like the flexible, easy-to-handle surface and the extra-brilliant printing.

for the latest and best in feed bags

brightest, strongest printing you've ever seen on a multi-wall bag!

Printing before embossing gives a 3-dimensional effect to the printing, adds amazing brilliance and intensity, and puts a real merchandising wallop behind your brand.

For a free sample and complete information, write on your business letterhead to Mr. O. N. Johnson.

stop bag slippage with

CROMWELL

STAK-GRIP® bags

Cromwell
PAPER COMPANY
4801 South Whipple Street
Chicago 32, Illinois

WISCONSIN ALUMNI RESEARCH FOUNDATION

LABORATORY SERVICES

PRACTICAL
CHICK FEEDING STUDIES IN BATTERIES OR ON LITTER
DETERMINATIONS OF:
•VITAMIN B_{12} •ANTIBIOTICS
•ARSENICALS
A.O.A.C. vitamin D_3 chick assays
U.S.P. vitamin D rat assays — results in 8 days
U.S.P. or A.O.A.C. vitamin A assays
Other vitamin assays
Amino acid assays
Biological protein evaluations
Proximate analyses and mineral determinations
Insecticide Testing and Screening
Other biological, chemical and microbiological services
PROJECT RESEARCH AND CONSULTATION

Write for price schedule

WISCONSIN ALUMNI RESEARCH FOUNDATION
P.O. Box 2059-N • Madison1, Wis.

Vigofac in broiler feeds

up to ¼ lb. more gain per bird in 10 weeks

Vigofac in swine feeds

up to 28 lbs. more pork per pig in 5½ months

Vigofac in turkey feeds

up to ¼ lb. more gain per bird in 18 weeks

...and now here are res

VIGOFAC® IN CA

Rate of gain increased 5 to 15%

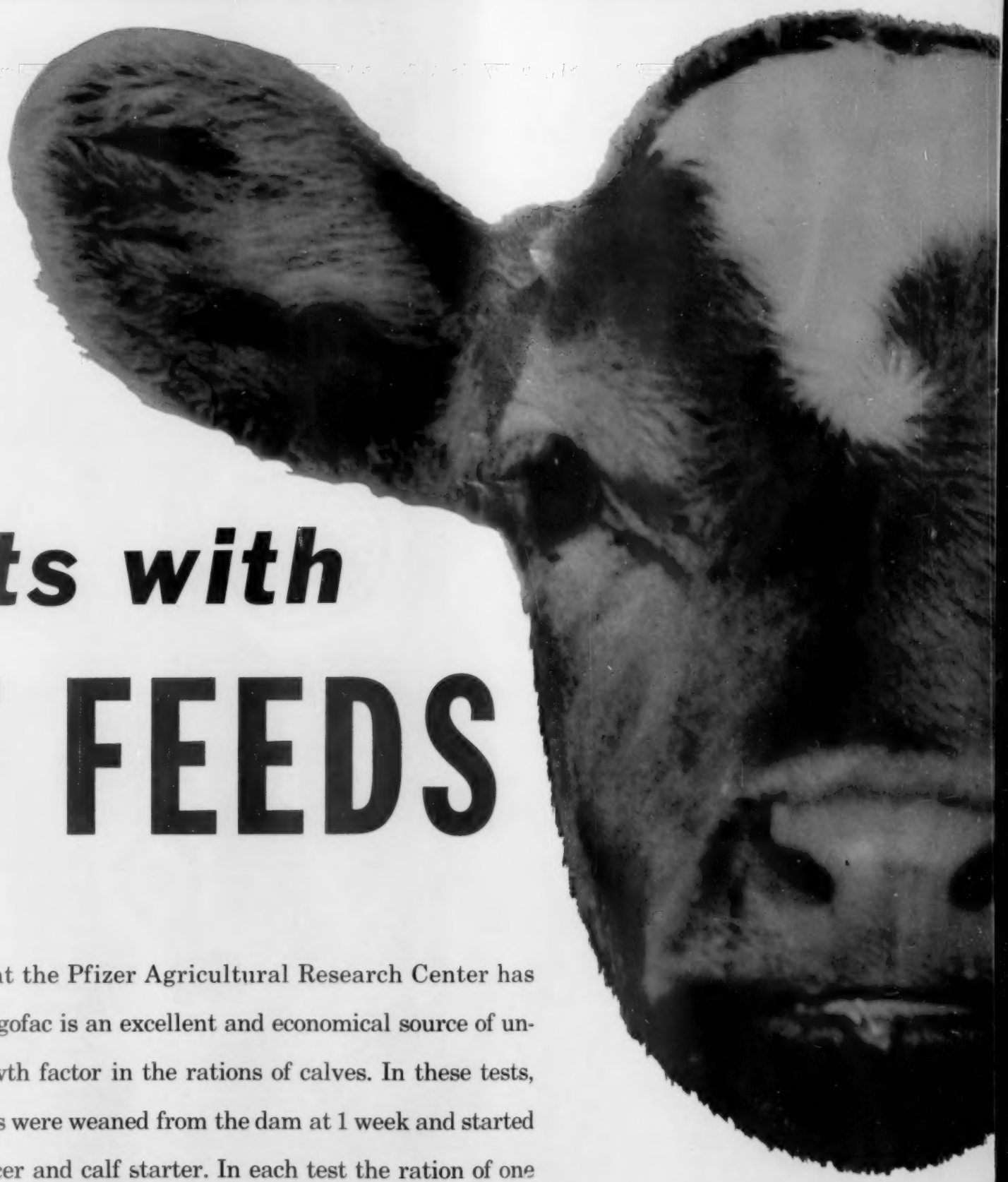
Feed efficiency improved 7 to 15%

Chas. Pfizer & Co., Inc.
World's largest producer of antibiotics

425 N. Michigan Ave., Chicago 11, Illinois

1151 Chattahoochee Ave., N.W., Atlanta 2, Georgia

1500 16th San Francisco



sults with

LF FEEDS

Recent tests at the Pfizer Agricultural Research Center has shown that Vigofac is an excellent and economical source of unidentified growth factor in the rations of calves. In these tests, Holstein calves were weaned from the dam at 1 week and started on milk replacer and calf starter. In each test the ration of one group was supplemented with Vigofac. Otherwise the conditions were identical.

These figures show the range of improvement produced by Vigofac. They are meaningful figures to both the feeder and the feed manufacturer.

Puts more speed in your feed—and in your sales

Vigofac®

TRADE MARK

a product of

Pfizer

Chas. Pfizer & Co., Inc.
Brooklyn 6, N. Y.

Street,
, California

630 Flushing Avenue,
Brooklyn 6, New York

7600 Ambassador Row,
Dallas 7, Texas

Says Jack E. White,
Van Buren, Arkansas

"We haven't spent a cent for repairs on our Brower Mixer and it is very economical to operate. We use the Mixer to make our own brand of feeds to sell, for custom mixing, and we also mix feeds for our own livestock. The Brower Mixer does a top-notch job and from our own experience, we can recommend it to anyone as an excellent investment."

BROWER
Whirlwind
MIXER

World's Largest Selling Mixer! Mixes a perfect blend in approximately 10 minutes—at a power cost of 3¢ to 5¢ per ton. Above and below-floor models. Five sizes—mixing capacities of 700, 1200, 2000, 3000, 4000 lbs. per batch. Heavy welded steel construction—built to give years of trouble-free service. Many exclusive features.

30 DAY TRIAL. WRITE for full details

BROWER MFG. CO.
402 N. 3rd, Quincy, Ill.

political gain what so surely would be disastrous in the end.

The opposition platform also proposes a return to the program under which our present problems developed, mandatory price support at 90% of parity.

Surely the record is now clear: Rigid price supports shrink markets and result in lower prices to farmers. They stimulate foreign competition and create income depressing surpluses. They increase government domination of farmers, increase taxes, and reduce opportunity for farm people.

The principle of flexibility was endorsed by the 80th, the 81st, and the 83rd Congress. I have checked the testimony preceding the Agricultural Act of 1948. Let me tell you what I found: The record shows that all the major farm organizations, including the Farmers Union, supported both the principles of flexible price supports and modernized parity.

On April 15, 1948, James G. Patton of the Farmers Union testified regarding the flexible supports of the Aiken Bill before the Senate Agriculture committee: "A major contribution of the measure, of course, is its proposal of a new system for the support of agricultural prices in which the level of support is related to the volume of supplies of each major farm product. The theoretical base of the proposal is admirable. It offers, to my mind, one way of moving toward three objectives that many economists and agriculturists have recognized as desirable."

I know that former President Truman favored flexible supports because in a message on May 14, 1948, he told Congress: "Now we must look ahead to a farm price support policy geared to our improved farm economy. Many shifts in production will have to be made, and flexible price supports will help us make them in an orderly manner. This will require authority to make prompt adjustments in support levels in line with current and prospective supply and demand conditions. It will also require flexibility in the choice of methods or programs that are designed to be most effective for individual commodities, that avoid waste, and that help bring about needed adjustments in production, distribution, and consumption."

Flexible supports have been endorsed, during the time he was in office, by every secretary of agriculture for 20 years.

Have right and wrong changed since 1948? Has white become black? Are we to understand that the leopard cannot change his spots, but that basic principles can?

I am glad to go again to the country to fight against the discredited wartime-incentive rigid price supports, which we have already twice defeated.

I am glad to go to the country with the truth that a government warehouse is not a market. Anyone—regardless of party or position—who advocates unending accumulation in government storage, is nothing short of irresponsible, and is blindly callous of the welfare of farm families and their future.

A storage program, I say again, is not a market. It is merely borrowing from the future.

I am glad to blow away the smokescreen of fallacies that hides the truth about sound farm policy. How can mandatory price supports for basic commodities solve the problems of Minnesota agriculture when only 11% of your income is from basic commodities?

We must destroy the fallacy that wartime farm prices were due to rigid price supports.

We must destroy the fiction that rigid price supports are a dependable way to protect farm income, even though surpluses accumulate.

Three Appointments Announced by ADM

MINNEAPOLIS — The appointments of James H. Kane as assistant regional sales manager for the New York and New England territories, Frederick W. Walworth as a member of the drying oils sales department, and Walter C. Doscher as manager of the Bayway plant, Elizabeth, N.J., have been announced by the Archer-Daniels-Midland Co.

Mr. Kane, who has been New York district sales manager of ADM's chemical products division since 1950, will be responsible to Paul McClay, assistant vice president in charge of sales for the company's New York sales office and six Atlantic seaboard states.

Mr. Walworth will assist Daniel C. Copenhaver, director of linseed and marine oil sales. He will handle the sale of marine oils from the Minneapolis office. He has been manager of the Bayway plant.

Mr. Doscher will succeed Mr. Walworth as manager of the Bayway plant. He has been assistant to H. V. Whelan, vice president in charge of ADM's international division. Previously he was manager of the company's import-export department. Since joining ADM in 1932, Mr. Doscher has handled the domestic sales of imported oils, marine oils and foundry products in the New York City area.

The most complete line of DOG FOOD ingredients

from ONE source

BOXER BRAND

44% SOY CAKE-LETS
expeller, pea-size
CORN KIB-LETS
expanded . . . kibbled
CORN FLAKES
cooked . . . toasted
WHEAT KIB-LETS
expanded . . . kibbled
WHEAT FLAKES
cooked . . . toasted
EXPELLER SOY BEAN MEAL
and other ingredient specialties

Nowhere else can you secure such a major part of your dog food ingredients. By combining your ingredient purchases in cars, mixed cars or LCL you are assured of freshness, and better inventory control with lower inventory investment. BOXER ingredients are manufactured by us specially for dogs—they are "prime" products, and not "by-products." Write for current prices and literature.

RALPH WELLS & CO.
MONMOUTH, ILLINOIS
QUALITY DOG FOOD INGREDIENTS

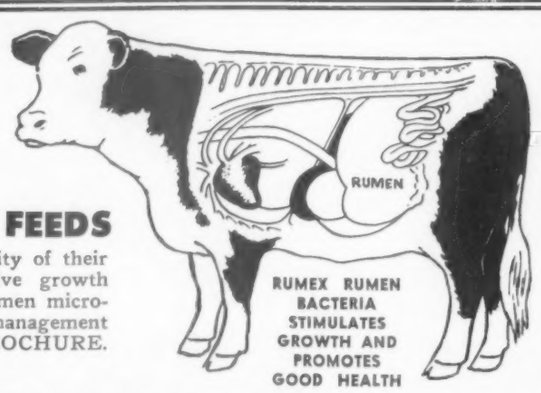
CUT FEEDING COSTS BY ADDING

RUMEX

TO YOUR

DAIRY & BEEF CATTLE FEEDS

No Cattle can gain faster than the activity of their rumen bacteria. RUMEX provides active growth stimulating, live colonies of the entire rumen microflora. RUMEX is the answer to many management problems. Send for the new RUMEX BROCHURE. It reveals many facts you should know.



VITAMINS, INC. 809 W. 58th Street, Chicago 21, Illinois
Basic Material Manufacturers and Headquarters for Technical Information.

Yes . . . Bemis Special Thread® is strong and needle-smooth. No kinks, knots or gouts. And you'll get tight closures, yet bags are easy to open. The many benefits you get from Bemis Special Thread make it *your most economical bag-closing thread.*

Bemis

General Offices—St. Louis 2, Missouri
Sales Offices in Principal Cities

Suggestions Offered on How to Handle Emergency Feed Program Transactions

HUTCHINSON, KANSAS — The addition of seven Kansas counties to the federal government's emergency feed program has prompted the Kansas Grain & Feed Dealers Assn. to pass along to its members directions on how a feed man should handle the program.

Wendell Becraft, state administrative officer of the Kansas Agricultural Stabilization & Conservation office, made the following suggestions:

1. The procedure requires that each purchase order be supported with a suitable sales document when the dealer turns the purchase order to the county ASC office in exchange for the dealer's certificate. We recommend that you make your sales slips in the following form: Name of farmer; date of delivery; pounds of eligible grain or approved mix, kind of grain or mix, price per hundred, and total in dollars and cents; less credit for purchase order in dollars and cents; amount due from farmer in dollars and cents.

2. It is recommended that you not approve the sale with government credit being allowed if the transaction does not take place between the time of the date of the purchase order and the expiration date. The date of the purchase order is shown on the purchase order in Section I. The final date for any purchase order to be transferred to a dealer is 60 calendar days after the date of issuance. We recommend that you make a careful check of these dates.

3. You should not permit the farmer to sign any purchase order in blank. If the sale is for only a portion of the feed covered by the purchase order, you may permit the farmer to hold the purchase order, or he can leave it with you unsigned, and the deliveries can be made from time to time between the issued and expiration dates and the farmer can sign the purchase order after the last delivery is made. You must have a sales slip to support every delivery and several sales slips can be attached to support one purchase order for a farmer. If you desire to secure your dealer's certificate earlier, that is, before the last delivery is made, you can suggest to the farmer that he return to the county office and get his purchase order broken up into more than one purchase order and in this way a single delivery may satisfy a single purchase order and you can complete each transaction without delay.

4. You must have a feed dealer's agreement with every county ASC office where you will exchange purchase orders. This must be executed not later than the time when the county is asked to exchange your purchase order for a dealer's certificate, and earlier is preferred.

We have . . . Ray Ewing PRODUCTS
Co-operative Feed Dealers, Inc.
P. O. BOX 431 DIAL 3-3521
BINGHAMTON, NEW YORK
C F D

A. E. Staley Firm Salesmen Promoted

DECATUR, ILL. — Promotions of two salesmen in the soybean division's formula feed sales department of the A. E. Staley Manufacturing Co., Decatur, have been announced by C. W. Thompson, manager of formula feed sales. The men are Harvey Bush and Clifford Breeden.

Harvey Bush has been made territory manager in western Illinois, with his headquarters in Macomb. He formerly was a territory manager in Indiana.

Clifford Breeden, who has been a feed salesman in Indiana, has been made a territory manager in northwestern Indiana, with headquarters in Brookston, Ind.

The Staley company, which markets a complete line of livestock and poultry formula feeds, recently completed a million-dollar expansion of its feed mixing plant at Decatur.

Ohio Association Gets New Secretary

GREENVILLE, OHIO—Lowell E. Folsom has resigned as secretary of the Ohio Grain & Feed Dealers Assn. and G. E. O'Brien has been named to succeed him.

The office of the association has been moved from Columbus to Greenville. The address is Ohio St. (no number necessary).

BRYANT CORN SHELLERS

. . . efficiently, economically and quickly shell and clean the corn in one time and labor saving operation . . . *like putting money in the bin!*

SMALLER CAPACITY MODELS HANDLE 150 to 200 and 400 to 600 BUSHELS PER HOUR.

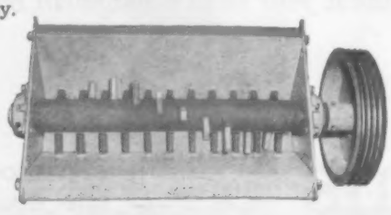
BRYANT No. 30 CORN SHELLER WILL PRODUCE FROM 800 to 1,000 BUSHELS OF SHELLED CORN PER HOUR . . . machine picked corn.

This high capacity, low maintenance sheller provides grain elevators with a fast, efficient and compact machine.

Shelled corn is discharged and cleaned the entire length of the shelling cylinder. Powerful suction is placed on the shelled corn by means of the large air trunk running from the eye of the fan to the shelled corn discharge point. Here, the shelled corn and any foreign material it may contain, drops into the air stream; the foreign material is picked up by the air stream and returned to the fan to be discharged with the cob and shuck. The thoroughly clean, shelled corn is dropped into a screw conveyor or bucket elevator. All units are precision manufactured of heavy gauge materials and are welded for strength and long lasting durability.

Get 15%-25% More Capacity with the BRYANT COARSE CRUSHER

The Bryant Coarse Crusher, made in three sizes 22", 30" and 36" to meet all requirements, and used ahead of your sheller to protect sheller from tramp iron, stones, and other foreign material, will step-up the capacity of your sheller by 15%-25%! Three sizes handle from 900 to 1,500 bushels per hour.



Bryant ENGINEERING CO.

WRITE TODAY for FREE illustrated FOLDER
Giving Complete Details, Specifications and Dimensions on all models

Quality - Our most Important Product for 45 years

It's CANADA Brand

LITTER

The ideal merchandising product for speedy turnover. Packed in plastic-lined bags for safe storage—convenient handling. Consistently top quality. Large stocks available for quick deliveries.

Distributed by:
CANADIAN PEAT SALES LTD.
P.O. Box 399, New Westminster, Canada

Poultry Processing Plants Expanding

GEORGETOWN, DEL. — Poultry processing is being stepped up. Though the price of Delmarva broilers may drop low at times, a great deal of planning and money are being put into the industry by those who have retained their faith in it.

This has shown itself particularly in the processing end, with the reopening of two former plants in the area, and the announcement by Swift & Co. that it will triple the production of its local processing plant.

J. G. Townsend, Inc., a poultry empire that has been retained in the Townsend family through the years, is building additions to its present feed mills and will start its own processing plant soon.

The Townsend operation is one of the largest breeder-hatcher-raiser combinations in the nation, and the corn and soybeans used in the feed are grown and milled under Townsend supervision. Additions to the soybean mill will be completed in November.

The Swift plant has been producing frozen browned fried chicken and has found the public response in metropolitan centers so great that it will branch out with larger supply. By January, about 40 more persons will be added to the 375 now employed.

During the summer, the old Millsboro Poultry Co. plant again was put into service under the name of Millsboro Poultry Processors Co., with Paul Schumacher in charge of operations. He was with the old plant. Officers of this company are: Norris Godwin, Millsboro, Del., president; Preston Workman, Georgetown, vice president; Jack Gordrey, Millsboro, secretary, and Coleman Bunting, Selbyville, Del., treasurer.

The former Eagle Poultry Packers, Inc., Frankford, Del., also is now open again as the Herholdt Poultry, Inc.

Producers' Turkey Fund Totals $111,318

MT. MORRIS, ILL. — A total of $111,318 had been raised by Sept. 6 toward the national goal of $150,000 for the Producers' Eat More Turkey Fund for 1955-56, the National Turkey Federation has reported.

While the official closing date for the 1955-56 fund-raising year has already been passed, many state leaders have asked for an extension of time, in order to make quota.

To date, 19 states have made or exceeded their quotas, and five have raised 125% of quota, to take care of the great need for promotion this year in order to market the record turkey crop. The five states that have pledged 125% of quota are: Arkansas, Kentucky, Illinois, South Carolina and Utah.

QUALITY FEEDS NEED QUALITY PREMIXES

QUALITY GOES IN BEFORE THE NAME GOES ON

Ray Ewing

ANTIOX
Vitamin A
Vitamin A & D
A-D-E
Vitamin B_{12}, 6, 24
Vitamin B_{12} and Antibiotic
Vitamin D_2, D_3
Vitamin E
Vitamin K
Choline Chloride 25%

Ray Ewing

Feed Flavors (Dry or Liquid)
Niacin USP 50%, 80%
Pigmenter
Special Pre-Mix 4
Riboflavin Supplements
Mix 3-3-10-C, 3-3-10-CD (Other combinations available on request)
Bacitracin Antibiotic Feed Supplement
Penicillin 4.0
Penicillin or Bacitracin (High Levels)
Kalf-Liff (Liquid — Kalf Tabs (Dry)
Liquid Mixes

Ray Ewing

PERFORMANCE PRODUCTS
Hi-Efficiency Pre-Mix
Starter, Broiler and Grower Pre-Mix
Turkey Starter and Grower Pre-Mix
Swine Pre-Mix
Thrifty Pre-Mix
Thrifty Pre-Mix BP
Poultry and Turkey Pre-Mix
Animal Pre-Mix

Ray Ewing

Arsanilic Acid
DI-Methionine

TESTED & PROVED FEED FORTIFICATION

1097 SO. MARENGO AVE. THE Ray Ewing COMPANY PASADENA 5, CALIFORNIA

Other Plants: Council Bluffs, Iowa - Ft. Worth, Tex. - Lancaster, Penn.

Ray Ewing PRODUCTS
BEFORE THE NAME GOES ON

Earl R. Reeves
Eastern Sales Representative
R. D. 2, Box 639-A Lancaster, Penn.
Ph.: Millersville, (LANCASTER CO) Pa. 8482

We have . . . Ray Ewing PERFORMANCE PRE-MIXES
BEFORE THE NAME GOES ON

Distributed in Minnesota, North and South Dakota and Western Wisconsin by:
Blomfield-Swanson
6009 Wayzata Blvd., Minneapolis 16, Minn.
Phone: ORchard 5-8806

We have . . . Ray Ewing PERFORMANCE PRE-MIXES
BEFORE THE NAME GOES ON

Distributed in Utah and Southern Idaho by:
Alan Bader
214 24th Street
P. O. Box 267 • Ogden, Utah
Telephone: Ogden 9323

We have . . . Ray Ewing PERFORMANCE PRE-MIXES
BEFORE THE NAME GOES ON

Distributed in Iowa by
V. A. MAGNUSON SALES COMPANY
1340 62nd St. Des Moines, Iowa
Phone: Des Moines 9-7897

We have . . . Ray Ewing PERFORMANCE PRE-MIXES
BEFORE THE NAME GOES ON

Distributed in Arkansas, Oklahoma and Texas by
The Tommy Thompson Co.
3617 Dryden Road Fort Worth, Texas
Telephone: WAlnut 3-0005

We have . . . Ray Ewing PERFORMANCE PRE-MIXES
BEFORE THE NAME GOES ON

Distributed in Washington, Oregon, Montana, No. Idaho and British Columbia by:
LEO COOK CO.
Feedstuffs
95 Connecticut St. Seattle 4, Wash. MAin 9737
410 Lewis Bldg. Portland 4, Ore. CApitol 2-1813

Use of Animal Fats in Feeds

Practical Ranges and Limitations in Use of Stabilized Fat in Different Types of Feeds

By R. W. MacGregor

EDITOR'S NOTE: *The increasing use of animal fats in feeds has brought growing feed industry interest in the handling and mixing of fat and in levels of use and other aspects of this phase of feed manufacture. Through the cooperation of the National Renderers Assn., a series of articles has been prepared on handling and applying fats in feed mills. The accompanying article, the first of this series, deals with the purposes for which the fat is used and with ranges and limitations of stabilized animal fat use in different types of feeds. Subsequent articles will deal with handling and storing of fat, application of fat to feeds and other aspects of fat use. The authors are officials or members of the renderers' association, and as fat suppliers, they are familiar with methods and problems in use of fats in feeds in different types of feed manufacturing operations and various areas of the country. The author of this first article, R. W. MacGregor, is president of Kentucky Chemical Industries, Inc., Cincinnati, and is a director of the National Renderers Assn.*

R. W. MacGregor

Animal fats are already considered a standard animal feed ingredient and only after a few short years of actual use in manufactured feeds. Those who have not already gone to the use of animal fats in their feeds are contemplating the use as well as the economics and their common problems involved in a production change.

The most common question concerning the use of animal fats in feeds is: "How much fat should we add to our feeds?" Unfortunately, it is impossible to give a blanket answer to this question, for animal fat has so many different uses and can be used at so many different levels in the feed.

To answer the question of "how much," we must first know the purpose for which the fat is to be used. Fat has the ability to improve the physical characteristics of a feed and, if balanced properly in the ration, to improve the nutritional value of the feed. Further, the palatability of the feed may also be improved through the use of animal fats. There is no other ingredient commonly used in feeds today which will serve so many different purposes in a feed when used at different levels.

Pellet Mill Capacity

A very important but often overlooked quality of animal fat is to improve the pellet mill capacity. The advent of the high energy corn and soybean type ration has tended to cut pellet mill capacity due to the low levels of fat in the soybean oil meal. The elimination of the millfeeds and high-fat oil meals has very materially cut into pellet mill capacities. It is a well known fact that the old process expeller oil meals pelleted much more easily due to the higher fat levels of the meal acting as a lubricant when the feed passed through the pellet die.

Practical past experience has shown that 1% of added animal fat will produce a considerable increase in pellet mill production and yet not seriously affect pellet hardness. In general practice, feed companies are using as high as 3% animal fat in feeds which are to be pelleted. However, in general, the higher the fat level of feed, the softer the pellet, and if the added fat level is too high, pelleting becomes very bad or impossible.

Physical Characteristics

Animal fats may be used to improve the eye appeal or cut down the dustiness of a mash feed. The addition of an animal fat to a mash feed tends to make the feed look somewhat darker and richer and tends to bring out the color of ingredients such as dehydrated alfalfa meal. The make-up or formula of a feed tends to establish the fat level required to improve eye appeal. No two feeds will necessarily require the same amount of fat to improve this physical characteristic.

The level of dusty or absorbent types of ingredients tends to establish the required level. Experience has shown ½ to 2% animal fat may be required to completely lay the dust in a particular formula. Some feed manufacturers' routine may add 1% animal fat to all poultry and swine rations for the purpose of improving eye appeal of their brand feed.

The addition of 1% animal fat to a swine or poultry ration will usually improve the palatability of the ration. For poultry, the addition of enough fat to prevent dustiness apparently makes the feed easier to eat. Workers at the University of Wisconsin have demonstrated that chickens prefer a feed to which animal fat has been added. Their tests show that when 5% animal fat was added to a broiler ration, the chickens preferred the ration with the added animal fat when both the feed with and without the fat were offered at the same time. Their results showed that the birds would eat 50% more of the feed with the added fat. Swine, too, prefer feeds with added animal fat—it has apparently a taste preference. Our testing has shown that hogs prefer the feed with the highest added fat level on any test that we have run. We have tested fat levels as high as 10% of the total ration, and this fat level was very definitely preferred by the hogs.

In Dog Foods

Animal fats have probably been used in dog foods as an ingredient longer than any other type of rations. Most major dog food manufacturers are now adding animal fat to their dog food meals, for the addition of fat very much improves the palatability of the food. The fat may be a special type of fat such as the fat obtained when bacon skins or rinds are cooked and the fat extracted from them. This fat will carry a very pleasant bacon aroma which is quite attractive to dogs. Any animal fat used for dog food should have a pleasant or clean odor. Most dog food manufacturers are adding from 2 to 4% animal fat to their meal type feeds.

The dog appears to prefer and less easily tires of a meal that carries a high percentage of added animal fat. Most dog fanciers have for years used "bacon drippings" or "high fat gravy" as a supplemental to the show dogs' diet. The reason for this is that a better condition and hair coat were noted when this type of feed was used. Further, a dog would stay on food better if this type of feeding procedure was used. Experience has shown that the high-fat dog foods meet with better public acceptance because fewer dogs reject this type of feed. It should be of special interest to the dog food manufacturers to investigate sources of the special fats which have the "nose appeal" that the dog likes.

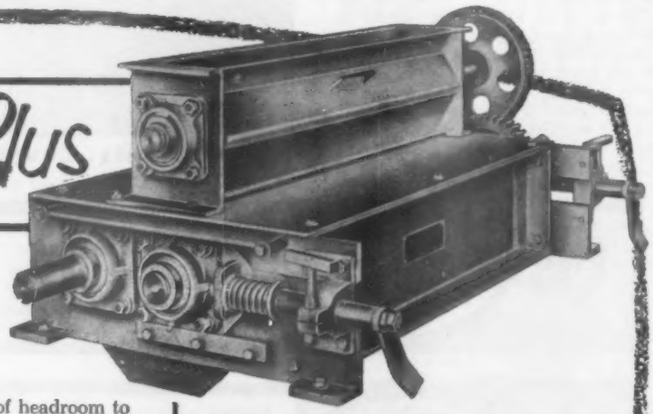
Feed Performance

The commercial feed manufacturer is using animal fats in his own brand of feed primarily to improve his feeds from a performance standpoint. A large feed user is now interested in how low a feed efficiency he can obtain on a certain weight bird or animal, and the high calorie value of animal fats makes it very important in this efficiency race. Further, animal fats have proven that from an economical standpoint, they have a place in our high-efficiency modern-type rations which dress less feed per pound of meat or dozen eggs.

No doubt the level of fat used by the feed manufacturer in his feed is affected by the price of the animal

SPROUT-WALDRON

CRUMBLIZER with the Big 4 Plus



Produces CRUMBLES more profitably

There's more money in crumbles when you produce them with a Sprout-Waldron Crumblizer. Operating costs are low. Original investment is small. Your profit margin is greater.

This unit requires only 10 h.p. and approximately 12 inches of headroom to handle the total output of the highest capacity pellet mill. It can be installed on the stream or in combination with a pellet cooler. Can be equipped with a flop valve to by-pass rolls when crumbling is not desired. Centrifugally cast rolls and proper corrugations insure long life and high production. Full range of sizes and models. Write for Bulletin 4-A.

Sprout-Waldron's BIG PLUS assures you of expert engineering guidance on installation . . . plus finest workmanship and service . . . plus 100% reliability . . . at no extra cost.

SPROUT-WALDRON

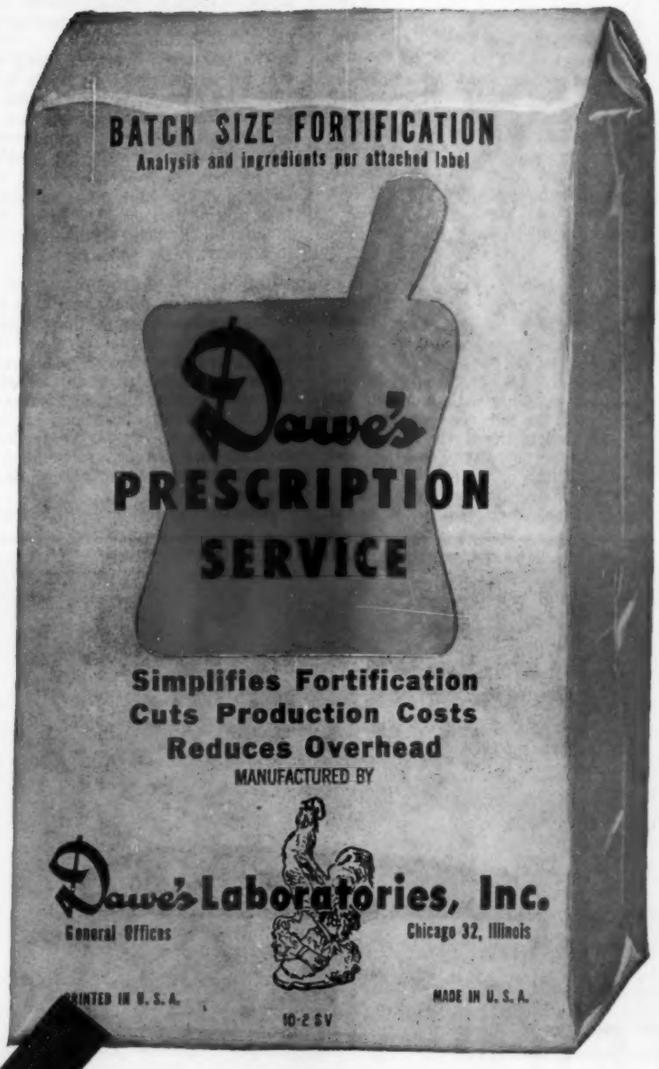
The Best in Milling Equipment Since 1866

61 LOGAN STREET • MUNCY, PA.

Exclusive Canadian Distributors: Strong-Scott, Limited, Winnipeg

PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS • MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS • BUCKET ELEVATORS • CUTTERS, CRUSHERS AND FEEDERS • REELS, SEPARATORS, AND ASPIRATORS BULK FEED TRUCKS • A. O. SMITH PERMAGLAS STORAGE UNITS • BUHLER BROS. FLOUR MILLING EQUIPMENT

FE/447



Rx a bag to the batch...

Save time. Save money. Buy your vitamins, trace minerals and antibiotics custom blended to *your own prescription.* They are *custom-packed,* too. In handy batch-size bags to match *your size* batch. No chance for employee error—only one instruction to remember: *"Add a bag to the batch."*

One order replaces scattered buying. One product replaces many individual micro-ingredients. Dawe's Prescription Service eliminates the errors and losses caused by unskilled labor handling costly materials in minute amounts. Yet, *you pay for ingredients only!*

Dawe's is the world's oldest and largest specialist in vitamin products for feeds. Dawe's is a basic producer of feed fortification factors. Dawe's offers you the widest selection of ingredients, and the most complete service.

Any practical combination of vitamins, trace minerals, and antibiotic is available through Dawe's Prescription Service.

Let us figure the cost of Dawe's Prescription Service feed fortifiers delivered in your plant, to *your* specifications. Write us.

Dawe's Laboratories, Inc.

4800 South Richmond St. Chicago 32, Illinois

fat because of the resistance to the higher price of feeds.

Not only is the price of animal fats a factor to be considered, but the protein cost as well that is required to balance it. Our research organizations around the country have shown us that we must keep a balance or ratio between protein and energy in order to have our rations perform properly and most economically. If the energy level of a ration is raised through the use of fat, then the protein level may also need to be raised to maintain a proper ratio.

Poultry Rations

Commercial feed manufacturers are using as high as 6% animal fat in their present day poultry rations. However, the average use is closer to 2½%. One reason for this choice of fat level is because of the problems in pelleting a feed when 3% or more fat is used in the ration. Some workers have advanced the idea that a boost in growth through the use of animal fats is not seen until at least 3% animal fat is included in the ration.

Mash feeds are limited as to the mentioned added fat level by the mechanical problems of mixing and handling. Some experimental work has shown excellent results with as high as 30% animal fat added to the ration. For instance, workers at the University of Maryland have reported that in four-week experiments, up to 30% fat has given satisfactory results when added to a practical or purified chick ration adequately supplemented with protein, minerals and vitamins. However, they report that fat levels of 15% have been slightly more effective in improving growth rate and feed conversion than normal or higher levels.

Generally, the higher fat rations produce chickens with a higher fat content in the body tissues. This higher fat level in the tissue is desirable because of improved cooking and taste qualities of the poultry.

Experiment stations have shown that swine when fed on high fat levels in the diet convert this fat very efficiently and do not necessarily put excess fat on the body.

The university work of using animal fat in the ration at levels up to 10% has proven very successful; in fact, feed efficiency improves as the fat level of the feed is raised, providing adequate protein is also supplied.

This combined with the fact that swine fed the high level of animal fats are not necessarily fatter hogs makes for a very promising future in efficient swine raising.

Fat Grade

The grade of animal fat to be used is still a question in many minds. Most feed manufacturers are still buying yellow grease for use in their feeds. Some are using better grades because of the fear of getting inferior types of materials in their feeds. Some of the darker grades of grease, such as brown grease, are also finding good acceptance in the feed trade.

Another fat product, which is a by-product of the soap industry, has also proven satisfactory for poultry feeding and this is a very dark type of fat.

Animal fat is normally sold on a grade system used by the soap industry; however, some of the grade factors which are important to the soap industry are not important from a feed standpoint. Color and free fatty acid, which are important to the soap industry, have little or no bearing on the feed value of animal fat. Most people associate free fatty acid with rancidity or an inferior feed grade of animal fat. This is not the case, for an animal fat which has been broken down into a very high percentage of free fatty acids may prove to be of equal feeding value to a low fatty acid material.

As long as an animal fat is not rancid or becoming rancid and does not have an objectionable odor and is clean, it should make a satisfactory feed ingredient.

Dairy Feeds

The one exception to this may be animal fat used in dairy feeds. There, cattle will eat feeds to which animal fat has been added, providing it does not have an objectionable odor or taste.

Cattle that are not used to animal fat may not take quickly to a feed containing a fat but will develop a liking or taste for it. Occasionally the fat, particularly of the darker grades, contains some odor or unknown substance which cattle do not like and will not readily eat.

Most dairy rations require only one-half (½) to one and one-half (1½%) percent added animal fat to bring them up to a desired fat level. It would certainly be advisable to use one of the better grades of animal fat if you plan to use it in dairy rations.

Beef Cattle Rations

Considerable work is being done with beef cattle in the feeding of animal fat. To date most of the work has been satisfactory in that more economical gains are made on rations containing the animal fat. Here again, the odor of the fat must be watched very closely because of palatability.

Research at our leading universities has shown us that we must keep a balance between energy and protein in the ration. The level of fat that we use will very much affect the energy value of the ration. If high levels of animal fat (3% and above) are to be used in your formula feeds, then care must be used that enough protein is supplied as well. An imbalance in the ration could cause feather picking and barebacking in chickens. In the animal feeds, the result of an imbalance would cause an excess amount of feed to be fed per rate of gain and this adverse effect of feed efficiency would show up in a poor dollar return and possibly in rate of growth as well. However, the properly balanced ration including animal fat can give your meats more

BETTER SERVICE FOR YOU
FROM SPENCER KELLOGG IN
50% PROTEIN SOYBEAN MEAL

In recent months Spencer Kellogg and Sons, Inc. have more than doubled their production capacity in 50% Protein Soybean Oil Meal. By using part of the resources of the great Bellevue, Ohio plant for this purpose we have been able to fill a larger part of the demand from eastern states. This releases meal from the company's Decatur production and greatly increases the meal available for the midwestern market, improving the shipping service.

Spencer Kellogg meal quality continues unrivalled. We use every care to obtain the best quality beans, protect them completely in storage and process them with the most trustworthy procedures. We control quality with laboratory tests in all our plants and keep samples of each shipment at the central control laboratory. With this care we have built up a reputation for the finest quality on the market. A shipment of Spencer Kellogg meal of any type is always a *"good* car". Ask your unloaders!

SPENCER KELLOGG MEAL SALES OFFICES ARE LOCATED AT:
Buffalo CL 5850 Chicago FR 2-3437 Decatur 5365
Des Moines 4-7291 Long Beach 67-9530
Minneapolis BR 4221 Philadelphia PE 5-6787

SPENCER KELLOGG AND SONS, INC.
BUFFALO 5, N. Y.
Spencer Kellogg Mills are located at: EDGEWATER, N. J. • BELLEVUE, OHIO • CHICAGO, ILL. • DECATUR, ILL. MINNEAPOLIS, MINN. • DES MOINES, IOWA • EL CENTRO, CALIF. • LONG BEACH, CALIF.

SPECIFY
Columbia Calcium
COLUMBIA QUARRY CO.
1007 Washington Ave.
ST. LOUIS 1, MO

Ask Us to Quote
Vegetable and Animal Proteins
Millfeeds, Alfalfa Meal, Molasses
and other Feed Products
Telephone—GR 6122 Teletype—KC 376
HERRING Sales
KANSAS CITY, MO.

eye appeal and more dollar return to the customer.

Further, workers at the University of Illinois state that they believe that there is something in fats that benefits broiler rations besides the increased calorie content of the fat alone. This means that improved rate of growth may also be noted through the use of animal fats. This combined with the improved finish of the dressed poultry, beef or hog offers the customer a chance to produce a better product.

It is our firm belief that animal fats will enjoy greater use in animal feeds each year for years to come. The reason for this is that the animal fats do so much to improve the ration from the standpoint of eye appeal, as well as performance, and yet animal fat is a surplus product and has every indication of remaining a surplus product.

The use of animal fats in feeds is an example of the American way of moving a surplus product which at the same time makes it possible to make another product better and more acceptable to everyone.

Cattle Research Reported at Michigan Event

EAST LANSING, MICH. — Research on hormones for fattening steers was included in the experimental work reported at the recent Cattle Feeders Day at Michigan State University.

Animal husbandmen at the university said implanting hormone pellets in fattening steers gave nearly a one third increase in gains. They reported that the hormone, progesterone-estradiol, produced gains of 3 lb. per day per steer, compared to daily gains of 2.3 lb. on non-treated steers.

The scientists said the implanted steers also gained faster than those fed diethylstilbestrol in this test. The top performing group ate less feed than either the non-treated lot or the lot fed stilbestrol, they said, and carcasses from the implanted lot had a greater percentage of lean meat than the other two lots.

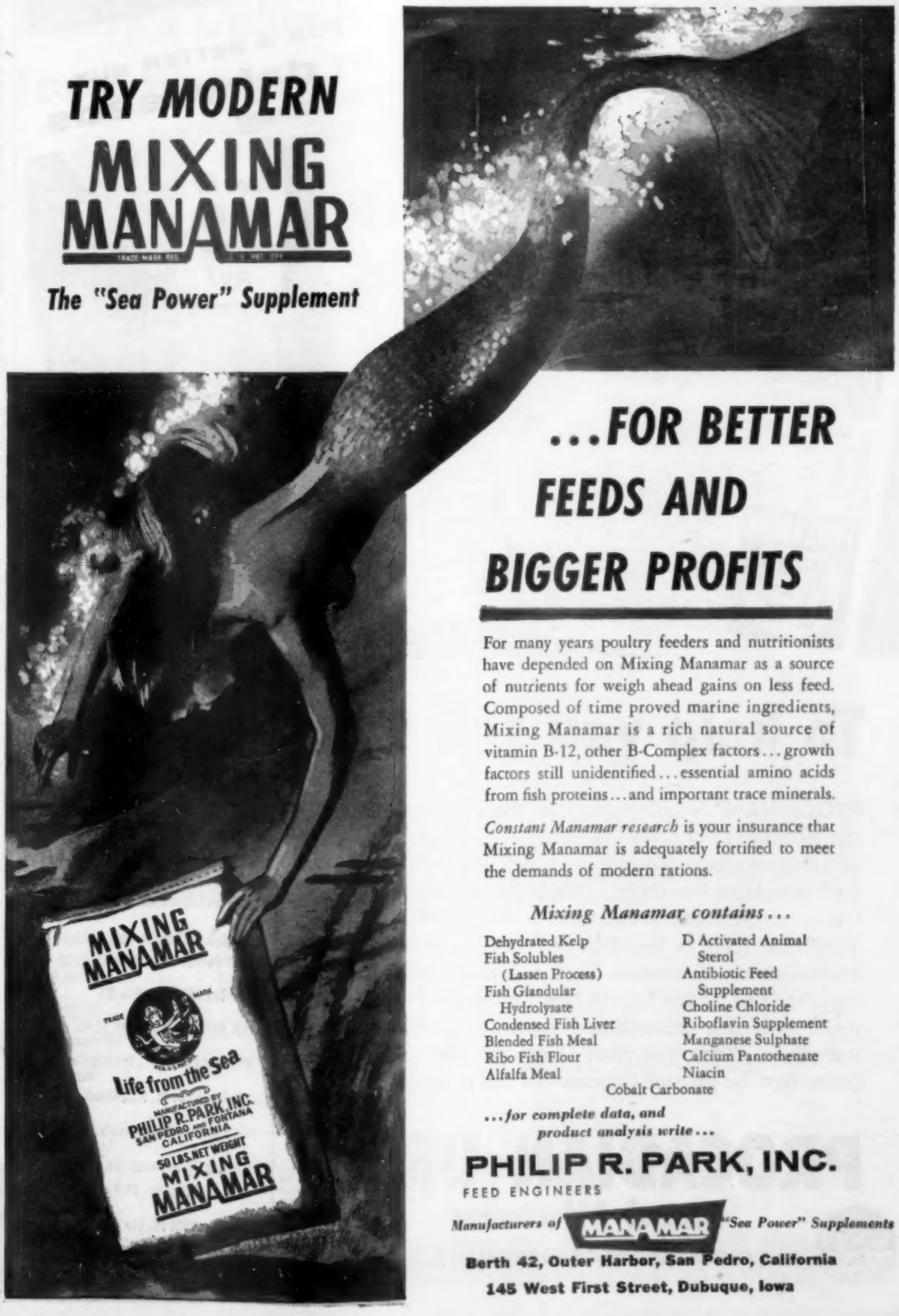
In another test, the researchers said they found that cattle fed stilbestrol during the entire time of a 140-day fattening period made the fastest and cheapest gains. Another lot had received the hormone during the first 70 days of the feeding period, another the last 70 days, and a third received no hormone at all.

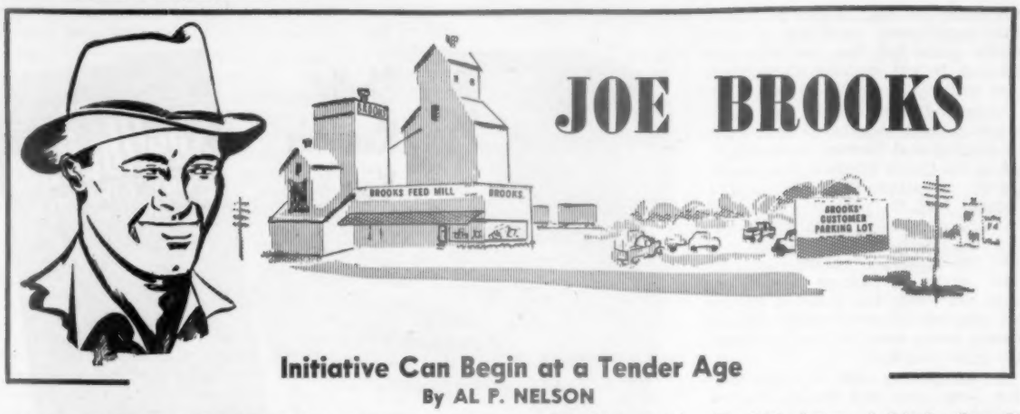
The lot getting the hormone the last 70 days had a rate of gain and a cost of gain more similar to those receiving the hormone the entire 140 days. Taking away the hormone during the last 70 days caused a drop in rate of gain and increased the cost of gain.

In a study to determine the proper protein levels in steer fattening rations, the MSU researchers found that 2 lb. of soybean meal fed daily produced the best results. These steers gained 2.79 lb. per day and returned $30.85 above the cost of the steer and feed. Three pounds of the supplement produced slightly faster gains but the cost was also greater to cut returns above steer and feed costs to $28.78 per steer.

Chopping fresh forage and hauling it to fattening cattle didn't pay in grazing and feeding tests reported to the Cattle Feeders' Day crowd. Cattle on alfalfa-brome pasture gained 1.98 lb. per day compared to 1.52 lb. daily gains for steers fed the fresh chopped forage and 1.54 for steers on rotation grazing. The cattle on pasture needed one acre per head; the rotation grazing lot required .85 acre; and the chopped forage group used .87 acre per head. No grain was fed.

In comparing test lots that were fed both corn and forage, the researchers found that cattle on pasture made slightly the fastest gains, ate less corn but required more acreage of forage. Cattle fed corn and hay gained distinctly the slowest, ate the most corn but on an acreage basis required less roughage.


TRY MODERN
MIXING
MANAMAR
The "Sea Power" Supplement
MIXING
MANAMAR
Life from the Sea
MANUFACTURED BY
PHILIP R. PARK, INC.
SAN PEDRO and FONTANA
CALIFORNIA
50 LBS. NET WEIGHT
MIXING
MANAMAR
...FOR BETTER
FEEDS AND
BIGGER PROFITS
For many years poultry feeders and nutritionists have depended on Mixing Manamar as a source of nutrients for weigh ahead gains on less feed. Composed of time proved marine ingredients, Mixing Manamar is a rich natural source of vitamin B-12, other B-Complex factors... growth factors still unidentified... essential amino acids from fish proteins... and important trace minerals.
Constant Manamar research is your insurance that Mixing Manamar is adequately fortified to meet the demands of modern rations.
Mixing Manamar contains...
Dehydrated Kelp
Fish Solubles (Lassen Process)
Fish Glandular Hydrolysate
Condensed Fish Liver
Blended Fish Meal
Ribo Fish Flour
Alfalfa Meal
D Activated Animal Sterol
Antibiotic Feed Supplement
Choline Chloride
Riboflavin Supplement
Manganese Sulphate
Calcium Pantothenate
Niacin
Cobalt Carbonate
...for complete data, and product analysis write...
PHILIP R. PARK, INC.
FEED ENGINEERS
Manufacturers of MANAMAR "Sea Power" Supplements
Berth 42, Outer Harbor, San Pedro, California
145 West First Street, Dubuque, Iowa



Initiative Can Begin at a Tender Age

By AL P. NELSON

It was close to 5 o'clock when Joe Brooks heard the door to his office open. He looked up from his desk work and saw a black-haired little boy of about 11 standing at attention, with a flat brown package under his arm and a scared look in his brown eyes.

"M-Mr. Brooks?" the little fellow asked.

Joe smiled warmly. "Sure, son. What can I do for you?"

The little fellow, clad in Levi's and a long-sleeved grey shirt, sat down. "I'm Bill Schiller, and I've got an idea for you."

Joe Brooks grinned and looked quizzically at the boy. "Now how do you know that I like ideas, Bill?"

Encouraged at this friendliness, Bill Schiller smiled swiftly, a little timidly. "I hear my dad talk about you sometimes. He says you always like to advertise."

Joe chuckled. "So that is the reputation I've got. Yes, I do like to advertise when I get a good idea, Bill. And what makes you think you have an idea for me."

"There's an awful lot of boys and girls going to my school—Sunnybrook Rural," said Bill in a low voice, "and many of their daddies buy feed from you."

"I suppose so," Joe agreed. "I cover quite a trade area on feed and other farm supplies in this county."

Billy Schiller fingered the clasp on the large envelope in his hands, opened the flap, pulled out an 8 by 10 glossy picture and handed it to Joe.

"It's a picture of the kids at our school," he said, proudly. "There's 42 of them."

"And only one teacher?" Joe asked. "She must be a good one."

Billy Has a Request

Billy smiled. "She is. We like her. A man comes around and takes our class pictures every year like that, Mr. Brooks. I was thinkin', Mr. Brooks, maybe you'd like to print this picture in your newspaper ad, and tell a little bit about our school. Maybe you'd even print the name of the teacher and all us kids in her school."

Joe looked sharply at the brown-eyed youngster. "M-m, that isn't a bad idea, Bill," he said. "In fall everyone likes to know who the teachers are in schools and who the pupils are. Maybe I could print the names by grades."

"A lot of kids would take copies of the newspaper home, Mr. Brooks, and show them to their fathers and mothers. That would be good advertising for you, wouldn't it?"

"It sure would," Joe declared. "No other feed dealer is doing that. A lot of people would clip the ad and paste up the picture on a wall—for reference. But say—if I printed a picture of your teacher and classmates, I'd have to do the same with other schools in the trade area. There are six, I believe."

Billy swallowed so hard, Joe could see him do it. "It still would be good advertising, wouldn't it?" he asked desperately.

"Well, perhaps it would," Joe agreed. "Funny thing about folks' pictures. They all like to look at them. If somebody told me my picture was in the newspaper I'd sure go buy a copy. Would you, Bill, if your picture was in the paper?"

The boy nodded quickly. "I'd buy a lot of them, Mr. Brooks—if I had the money."

"Are you short of money, Bill?"

The boy was silent, then his eyes sought the floor. "Yep, Mr. Brooks.

For a better buy in cattle and sheep feeds
Look for UREA on the tag!
Low-cost meat and wool production calls for a feed supplement that balances your pasture, roughage and home-grown grain to best advantage. By using PROCADIAN* Urea as a quick, concentrated source of protein, your feed manufacturer makes better cattle and sheep feeds for your money.
The most economical feed to use is a quality mixture. Urea along with good oilmeals, minerals, vitamins and energy feedstuffs provides all the essentials to balance your roughage feeding program at low cost. Feeds containing Urea help speed up rumen activity to help your animals to get more feed value, and more milk, out of their entire ration.
Many natural feedstuffs, including oats, alfalfa, and even oilmeals, have always contained some Urea as part of their protein. When you use modern, balanced feeds containing PROCADIAN Urea, you get an excellent and low-cost combination of nutrients to balance your roughage. For quality and economy, look for Urea on your feed tag.
PROCADIAN UREA FEED MIXTURE The QUICK Source of PROTEIN in Mixed Feeds
NITROGEN DIVISION Allied Chemical & Dye Corporation
New York 6, N.Y. · Omaha 7, Neb. · St. Paul 4, Minn. · Atlanta 3, Ga. · Hopewell, Va. · Indianapolis 20, Ind. · Kalamazoo, Mich. · San Francisco 4, Cal. · Ironton, Ohio · Columbia 1, S.C. · Los Angeles 3, Cal.
FOR A BETTER BUY in dairy feeds
Look for UREA on the tag!

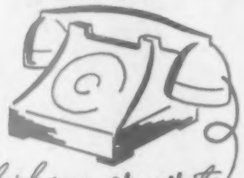
To help you sell feed

PROCADIAN* is telling your customers the profit-building details of the rumen-urea story in a continuing series of advertisements like those shown above. The high-quality balanced feeds and concentrates you make with Urea as an ingredient are featured in these advertisements. Watch for them in livestock and dairy magazines read by thousands of farmers. They tell your customers to look for Urea on the tag—to look for the good feeds you make with this concentrated source of protein as an ingredient. When you need Urea—get PROCADIAN. Order now for prompt shipment by rail or truck.

PROCADIAN* UREA
Feed Mixture

THE QUICK SOURCE OF PROTEIN IN MIXED FEEDS

*Trade-mark



Telephone or write

NITROGEN DIVISION
Allied Chemical & Dye Corporation

P.O. Box 166, Omaha 7, Neb. Bellevue 1464
P.O. Box 98, Ironton, Ohio Ironton 8-4366
6060 College Ave., Indianapolis 20, Ind. Clifford 5-5443
P.O. Box 188, Columbia, Mo. Gibson 2-4040
P.O. Box 869, Kalamazoo, Mich. Kalamazoo 5-8676
235 Montgomery St., San Francisco 4, Cal. Yukon 2-6840
127 Peachtree St., N.E., Atlanta 3, Ga. Walnut 7805
1203 Gervais St., Columbia 1, S.C. Columbia 3-6676
P.O. Box 28, Hopewell, Va. Cedar 9-6301
45 N. Snelling Ave., St. Paul 4, Minn. Midway 5-2864
2999 West 6th St., Los Angeles 5, Cal. Dunkirk 8-3201
40 Rector St., New York 6, N.Y. Hanover 2-7300

NOW...Your Feed Business Has Unlimited Territory!
FORDS Portable Processor

Meet on-the-farm feed processing competition with this complete feed processor. Write for free booklet about the many time-saving, money-saving features.

MS MYERS-SHERMAN COMPANY
2601 S. Illinois St., Streator, Illinois

LONFOSCO Soft Phosphate with Colloidal Clay
Prepared by: Loncala Phosphate Co. High Springs, Fla.
Distributed by: Warren-Douglas Chemical Co.
1513-15-17 Burt St., Omaha, Neb.

I might as well tell you. That's what I came here for."

"To get some money?"

Again the boy nodded.

"Why?"

The boy swallowed hard. "Well, I want one of those big pictures, and I want six small ones for myself so I kin swap with my friends. Pop won't let me buy them this year. He says I got them the last four years, and I haven't changed enough since last year, so I don't need any new pictures. But, gee, I have, Mr. Brooks. I must have grown a whole inch. And I got lots more muscle. Feel!"

Bill bunched his arm and proudly held it up for Joe to feel. Joe did so, then whistled. "Say, I'll bet you can lick anybody your size with that muscle, Bill."

Bill's Warning

Encouraged, Bill put down his arm. A smile crept across his face. "Nobody my age better start foolin' with me," he warned.

Joe chuckled. "That's the spirit, Bill. Don't pick a fight, but be willing to fight when you have to. How much do those pictures cost?"

Again the boy looked discouraged. "They cost $3.75 all together," he said. "Isn't that a lot?"

"Well, that depends on how much you want them, Bill. I can use this idea of yours printing pictures of rural schools, teachers and pupils," Joe said, gently. "I'll make out a check for you for $4 and give you a receipt for the idea, so's you can show your dad. He ought to be proud he's got a son who can figure out an idea a business man can use."

Bill Schiller beamed brightly, then frowned. "But I don't need $4, Mr. Brooks. I only need $3.75 for the pictures."

"I am paying you $4, Bill," Joe said sternly. "That's my idea of a fair price. You may want to cash that check down at the Corner Drug Store. I understand they got some mighty good sodas down there for 25¢."

Bill Schiller took the check and receipt for the idea, a stunned look on his face. Then he smiled quickly, happily, as he thrust the 8 by 10 picture back in the envelope. "Thanks, Mr. Brooks. I almost forgot about those sodas. When you come around to get the information about our school you can use my big photo if you want—if I get it back."

"Thanks, Bill. I'll be calling on you." Chuckling, Joe stood at the window of his office, watching the young boy march proudly down to the drug store.

Illinois Plans Sheep Production Day

URBANA, ILL. — The College of Agriculture of the University of Illinois has announced plans for a Sheep Production Day. The event will be held Oct. 26 in the Stock Pavilion on the university campus here.

U. S. Garrigus, department of animal science, is chairman of the event.

W. H. NIGH & COMPANY
Grain Feed Ingredients
Rice By-Products
312 Oil & Gas Bldg. FAirfax 3-8331
HOUSTON, TEXAS

NELLIS
FEED COMPANY
Brokers
of Feed Ingredients
4010 Board of Trade Bldg.
WAbash 2-7322 Chicago 4, Ill.
TWX 623

Letters to the Editor

To the Editor:

I was very interested in your report of the Poultry Science Assn. meeting in the Aug. 25, 1956, Feedstuffs. I would like to call your attention to an apparent misconception of your reporter of my paper as his remarks need clarification.

Your reporter states, "For some unexplained reason, even though the birds in this test made phenomenal gains, the feed efficiency was very poor. In many instances, more than 3 lb. of feed were needed to produce a pound of gain."

In the studies reported, 12 trials employing 80 lots of replicated pens and 2,560 birds were involved. In three of these lots involving 96 birds, feed efficiencies were over 3 lb. of feed per pound of gain. This occurred in one trial in which slow growth occurred and for which I apologized. However, as the differences secured did emphasize a point, that table was shown. One of the remaining lots of 32 birds failed completely. The feed per pound gain for the other 76 lots was:

No. of Lots	No. of Chicks	Lb. Feed per lb. Gain
1	32	2.8
13	416	2.5-2.6
38	1,216	2.3-2.4
13	416	2.1-2.2
7	224	1.9-2.0
4	128	1.7-1.8
76	2,432	

As was evident from the paper presented, all lots except the final lot were partially deficient in one or more nutritional factors. That final lot of mixed sex (new Hampshire Indian River) chicks at the end of the four weeks' experimental period (chicks 4 weeks, 2 days old) had an average weight of 578 grams with a feed efficiency of 1.8 lb. of feed per pound of gain.

For the above reasons I feel your reporter failed in both his understanding and reporting of this paper.

R. A. Rasmussen,
Research Department,
Hiram Walker & Sons, Inc.,
Peoria, Illinois.

SELLS FEED MILL

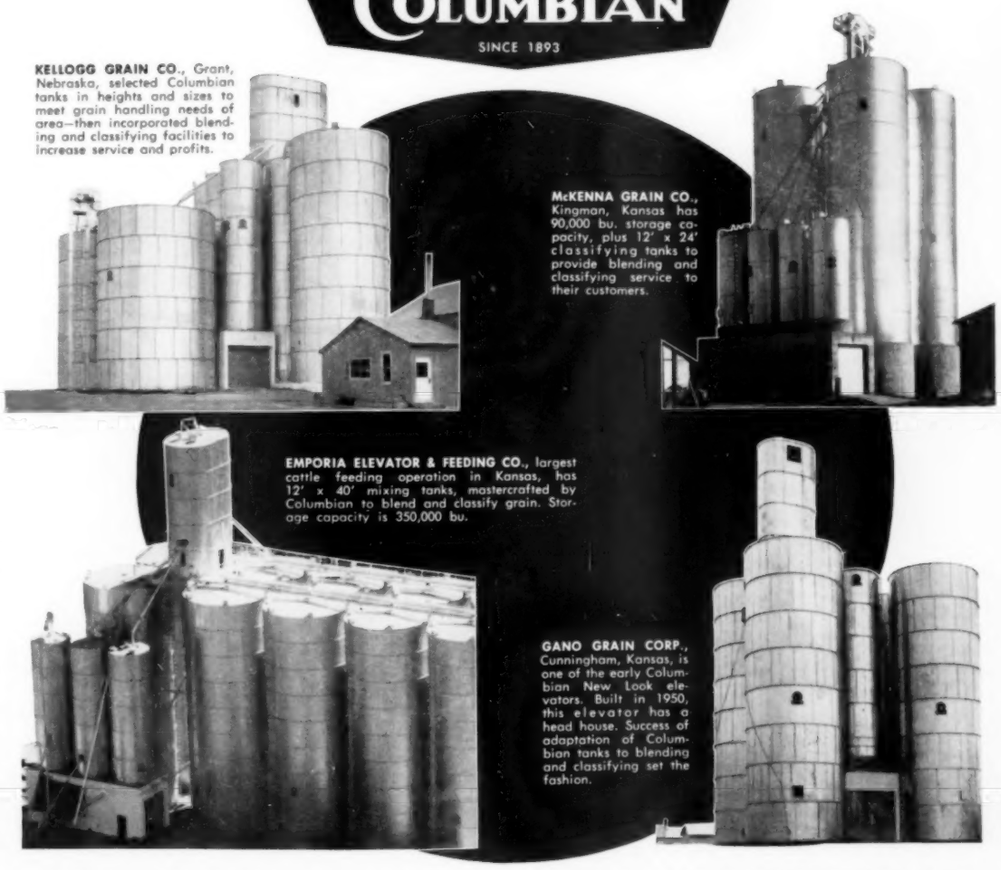
MONTGOMERY, MINN. — Ted Grundhoffer has sold his Montgomery Feed Mill to Gerald Boyle of Hutchinson, Minn., Raymond Harpel of Glencoe, Minn., and Homer Holtz of Belle Plaine. The new owners are all married to sisters. The mill is under the management of Mr. Boyle and Mr. Harpel. Purina feeds will be added to the mill's line, which now includes Man-A-Mar home mixes.

MILL ADDITION

HILLS, MINN. — The Hills Feed Mill is adding three new bins of about 400 bu. capacity to the building. Tom Dyson owns the mill.

Today's Columbian "NEW LOOK" will be Tomorrow's Fashion in Country Elevators!

MASTER-CRAFTED BY
COLUMBIAN
SINCE 1893



KELLOGG GRAIN CO., Grant, Nebraska, selected Columbian tanks in heights and sizes to meet grain handling needs of area—then incorporated blending and classifying facilities to increase service and profits.

McKENNA GRAIN CO., Kingman, Kansas has 90,000 bu. storage capacity, plus 12' x 24' classifying tanks to provide blending and classifying service to their customers.

EMPORIA ELEVATOR & FEEDING CO., largest cattle feeding operation in Kansas, has 12' x 40' mixing tanks, mastercrafted by Columbian to blend and classify grain. Storage capacity is 350,000 bu.

GANO GRAIN CORP., Cunningham, Kansas, is one of the early Columbian New Look elevators. Built in 1950, this elevator has a head house. Success of adaptation of Columbian tanks to blending and classifying set the fashion.

Blending and Classifying facilities for grains has become the profitable fashion in country elevators. They offer convenience and savings for growers, feeders and shippers . . . permit receiving different types and grades of grain with proper facilities for storage and handling. Columbian bolted steel tanks are ideal for these facilities — providing fire-safe, vermin-proof, economical and easily erected permanent structures. And Columbian engineers *can tailor these tanks to your exact requirements* — as they have tailored grain storage for millions of bushels all over the world. Columbian tanks are not only weatherproof but so tight that they are widely used for the storage of dehydrated alfalfa under inert gas pressure.

For more complete information, ask for the new Columbian Grain Tank book. It's Free. Better still, invite a Columbian engineer to discuss your elevator or storage requirements. You incur no obligation.

COLUMBIAN STEEL TANK COMPANY

Associate Member, Grain & Feed Dealers National Association. Member, American Dehydrators Association.

P. O. Box 4048-R Kansas City, Mo.

Steel — Master-crafted by Columbian — First for Lasting Strength

Reg. U. S. Pat. Off.

BACIFERM®

proved* antibiotic effectiveness...

Only BACIFERM gives you all these values:

- **Highly effective bacitracin antibiotic content**
- **Longer life in the digestive tract**
- **Effective control of harmful bacteria—before they can escape into the tissues**
- **Vital selective action that encourages beneficial bacteria**
- **Extra vitamins and growth factors**
- **Effective appetite stimulation and promotion of growth**
- **Economy—25% lower cost than the tetracycline-type antibiotics**

...offering you high profits and assuring your customers full effectiveness at lower cost.

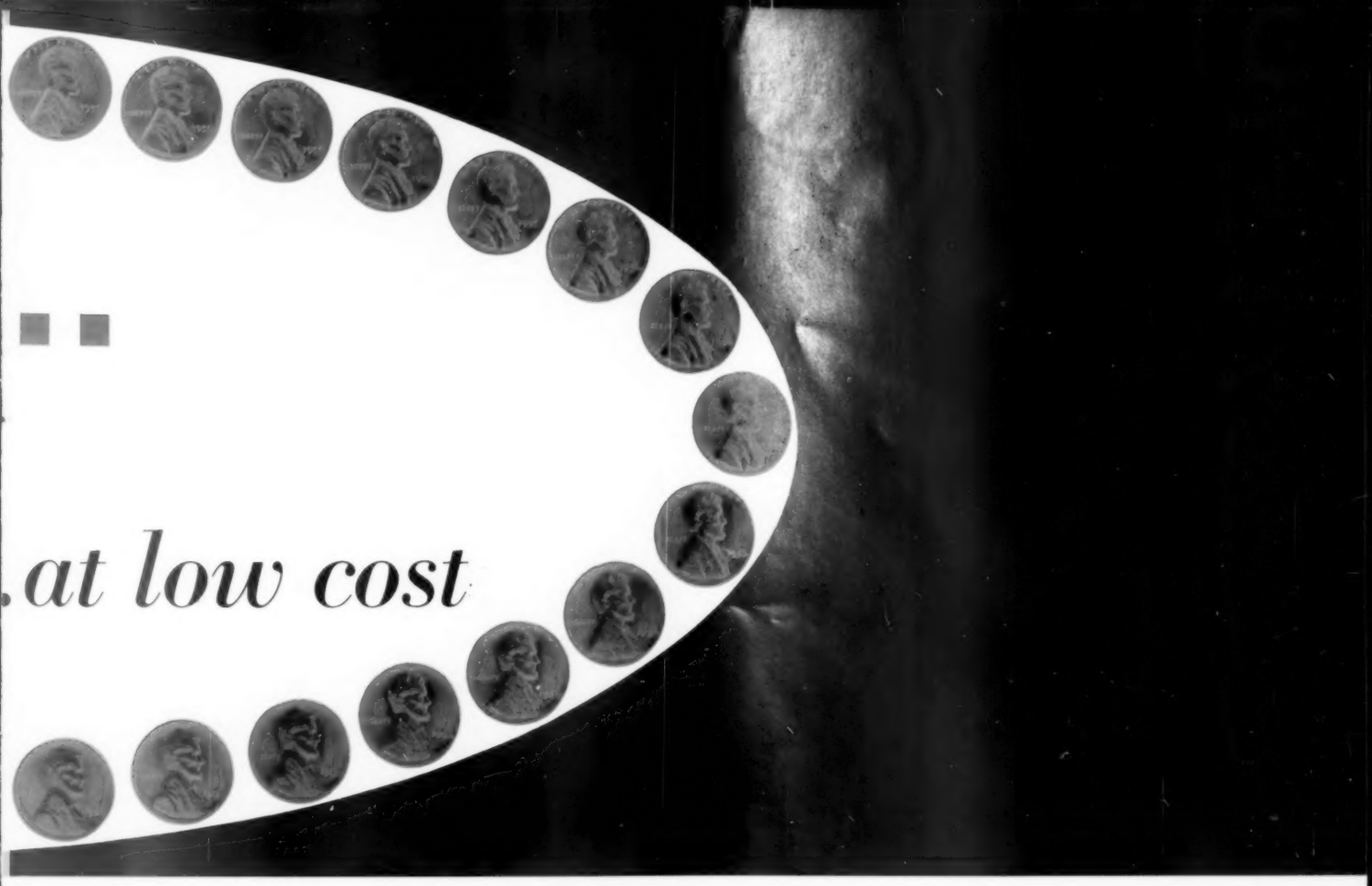
Baciferm Maintains Protection Where it is Needed Most . . . in the Digestive Tract

Evidence indicates that the action of antibiotics—when added to feed or drinking water—is confined to their effect on bacteria in the digestive tract.[1, 2] Most antibiotics are lost from the digestive tract, leaving most of it unprotected. But it is generally agreed that bacitracin stays in the tract longer than other antibiotics, thus maintaining an effective antibiotic concentration throughout the entire digestive tract.

This means bacitracin controls harmful bacteria before they can escape into tissues, and, unlike some costly antibiotics, the bacitracin in Baciferm does not hinder growth of beneficial bacteria.[3]

In Poultry, Baciferm Controls Secondary Invaders . . .

Bacitracin has proved effective in the prevention and treatment of blue comb, air sac disease (CRD), infectious sinusitis and non-specific enteritis.[4, 5, 6] A top-performing antibiotic, bacitracin assures quick control of dangerous secondary invaders. Its content of this proven antibiotic makes Baciferm an antibiotic supplement that measures up to any demand. You will make lasting friends



...at low cost

of your customers by using Baciferm in all of your high-level poultry feeds.

In Swine, Baciferm Controls Scours . . .

Primary cause of black scours are disease-causing strains of Vibrio bacteria. And tests show that bacitracin is the *most effective* antibiotic in fighting these strains.[7, 8] Other tests show clearly that bacitracin, because it provides protection throughout the entire digestive tract, is effective in many diarrheas and dysenteries where other medication has failed.[9, 10] Also, a series of rigidly-controlled tests reveals that when swine scours are treated by bacitracin, the recovered animals are more likely to become thrifty.[11]

Supply your customers with bacitracin by recommending economical Baciferm. You help your customers make more profit. By using Baciferm supplements to combat scours, you'll be doing your customers—and your business—a service.

Added Benefits Secured with Baciferm

Baciferm provides vitamins, amino acids, unidentified growth factors.

Baciferm stimulates appetites[12]. . . bolsters the normal body defenses against diseases of the digestive tract[13]. . . does not develop resistant bacterial strains.[14]

Selling Baciferm is good business. You supply your customers the economy and proved effectiveness of bacitracin antibiotic . . . in a supplement that meets every requirement and brings your satisfied customers back for more.

✻PROVED BY THESE SCIENTIFIC PAPERS:

1. Elam, F. F., Jacobs, R. L., Tidwell, W. L., Gee, L. L., and Couch, J. R.: Possible Mechanism Involved in the Growth-Promoting Responses Obtained from Antibiotics, J. Nutrition 49:307 (Feb.) 1953.

2. Stokstad, E. L. R.: Antibiotics in Animal Nutrition, Physiol. Rev. 34:25 (1945); Biol. Abstr. 28:21737 (Sept.) 1954.

3. Jukes, T. H.: Antibiotics in Nutrition. Antibiotics Monograph 4, p. 90. Medical Encyclopedia, Inc. New York, N. Y.

4. Romoser, G. L., Shorb, M. S., Combs, G. F., and Pelczar, M. J., Jr.: Effect of Antibiotics and Diet Composition on Cecal Bacteria and Growth of Chicks. Antibiotics and Chemotherapy 2:42 (Jan.) 1952.

5. Antibiotic Regulations, Food and Drug Administration, U. S. Department of Health, Education, and Welfare. Title 21, Section 146e. 425 (F) (4).

6. Smyser, C. F., Jr., Cleverdon, R. C., Kulp, W. L. and Matterson, L. D.: Effect of Dietary Antibiotics on Number of *Clostridium perfringens* in Feces of Chickens. Antibiotics and Chemotherapy 2:363 (July) 1952.

7. Graham, R., Boley, L. E., and Woods, G. T.: Bacitracin in Necrotic Enteritis of Swine. North Am. Vet. 31:736 (Nov.) 1950.

8. Boley, L. E., Woods, G. T., Hatch, R. D., and Graham, R.: Studies on Porcine Enteritis. II Experimental Therapy with Sulfathalidine, Sulfamethazine, Sodium Arsanilate, and Bacitracin in a Natural Outbreak of Swine Dysentery, Cornell Vet. 41:231 (July) 1951.

9. Konde, W. N.: Oral Bacitracin in Diarrheas, North Am. Vet. 30:766 (Dec.) 1949.

10. Unpublished Reports. Commercial Solvents Corporation, Nutritional Research Farm.

11. Konde, W. N.: Further Investigation of Oral Bacitracin in Diarrheas. North Am. Vet. 33:36 (Jan.) 1952.

12. Thayer, R. H., and Haller, V. G.: Antibiotics and Nitrogen Utilization in Growing Cockerels, Poult. Sci. 34:97 (Jan.) 1955.

13. Meleney, F. L., Johnson, B. A., and Teng, P.: Further Experiences with Local and Systemic Bacitracin in the Treatment of Various Surgical and Neurosurgical Infections and Certain Related Medical Infections. Surg. Gynec., and Obst. 94:401 (April) 1952.

14. Meleney, F. L., Altemeier, W. A., Longacre, A. B., Pulaski, E. J., and Zintel, H. A.: The Results of the Systemic Administration of the Antibiotic Bacitracin, in Surgical Infections. A Preliminary Report. Ann. Surg. 128:714 (Oct.) 1948.

For further information, write:

Animal Nutrition Department

CSC

COMMERCIAL SOLVENTS CORPORATION

260 Madison Avenue, New York 16, N. Y.

IN CANADA: Reliance Chemicals, Ltd., Montreal, Que.
IN MEXICO: Comsolmex, S.A., Mexico 11, D.F.

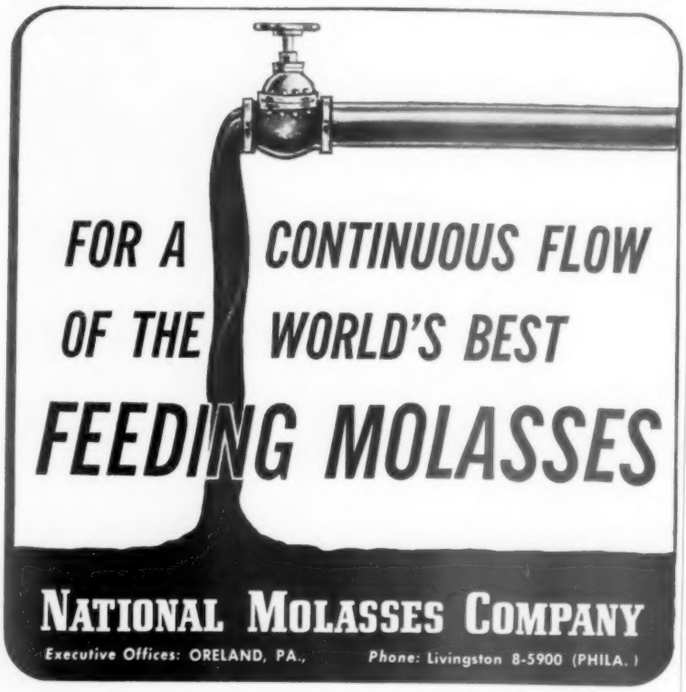
USDA Report Cites Gain in Use of Molasses for Feed

WASHINGTON—Use of molasses as livestock feed is increasing, says a marketing research report just released by the U.S. Department of Agriculture.

Relatively satisfactory prices for molasses in comparison to other feeds have encouraged feeders to mix molasses with low-value roughages, thereby increasing the palatability and digestibility of such low-value feeds as corncobs, straw and cotton stalks and hulls, the report says. The extent to which feeders were able to reduce feed costs by mixing molasses with other feeds was dependent largely on the size of their feeding operations and the volume of bulk molasses that could be delivered at one time. Improved appearance of animals being fed molasses was mentioned frequently by feeders as a reason for using the product, USDA says.

The problem of supplying molasses to feeders in remote areas is an obstacle to further expansion of the markets. Inadequate handling, storing and feeding facilities, particularly with the smaller feeders, are a deterrent to the use of molasses, the report points out. This lack of adequate facilities and the distance from supply centers increase transportation and handling costs to a point where they have made use of the product uneconomical, it says. The report suggests suitable ways for handling and storing molasses that might encourage its use by small-scale operators.

Copies of Marketing Research Report No. 132, "Marketing Molasses for Livestock Feed," may be obtained from the Office of Information, U.S. Department of Agriculture, Washington 25, D.C.


FOR A CONTINUOUS FLOW
OF THE WORLD'S BEST
FEEDING MOLASSES
NATIONAL MOLASSES COMPANY
Executive Offices: ORELAND, PA., Phone: Livingston 8-5900 (PHILA.)

Ask for it by name

★ More protein
★ More Vitamin-B¹
★ Solvent Extracted Meal or Pellets

Minnesota 36% PROTEIN LINSEED MEAL

Minnesota Linseed Oil Company
Minneapolis 21, Minnesota

Bid for Buffalo Plant Rejected

BUFFALO—A high bid of $30,000—higher of two—for the former Pratt Food Co. feed mill here was rejected at a public auction in Hotel Statler.

The bid was made by James Harper, president of an Erie, Pa., real estate concern, who said he represents undisclosed Buffalo and out-of-town interests.

Stephen A. McDonald, vice president of Joseph P. Day, Inc., New York auctioneers who conducted the auction, said he expects to get a suitable bid shortly.

The plant, which has four buildings totaling 120,000 sq. ft. and two grain silos with a capacity of 280,000 bu. on a 6.2-acre tract, was closed several years ago and production moved to Hammond, Ind.

STORAGE ELEVATOR BUILT

WALKERTON, IND.—The B. I. Holser & Co. has completed a 50,000-bu. storage elevator here for storing government shelled corn, all of which is raised in Lincoln Township. Maynard Alderfer is manager of the elevator. This is the second storage building constructed by the company.

A. P. Goubelman L. R. Baker

Eshelman Feed Sales Representative Retires

LANCASTER, PA. — Arthur P. Goubelman, veteran sales representative for John W. Eshelman & Sons, will retire Sept. 30 after over 35 years' service with the company. Mr. Goubelman joined the Eshelman firm in 1921. His sales territory has been New York City, Westchester County, New York, and Fairfield, Hartford, Litchfield and New Haven Counties in Connecticut.

During his many years in his territory, Mr. Goubelman became a familiar figure in the feed business. He lives in New York City.

Succeeding Mr. Goubelman in the New York-Connecticut territory will be Lloyd R. Baker, Garden City, N.Y. Mr. Baker has been the Eshelman sales representative for the company's Long Island territory for a number of years. He will continue to cover the Long Island territory as well as Mr. Goubelman's former area.

Mr. Baker, a graduate of Pennsylvania State College, joined Eshelman in 1938 and until his appointment as a salesman in 1946 worked as a resaleman in Pennsylvania and the Delmarva Peninsula. He is a native of Allen, Pa.

Federal Inspection Of Poultry Increases

WASHINGTON — The trend toward federal inspection of poultry is increasing, according to figures released by the U.S. Department of Agriculture.

During the first six months of this year the poundage of poultry bearing the U.S. "Inspected for Wholesomeness" label shot up 53% above the poundage federally-inspected during that period a year ago.

According to Agricultural Marketing Service figures, approximately 428,000,000 lb. of ready-to-cook poultry were processed under the USDA poultry inspection service from January through June. The total for the first six months last year was about 279,000,000 lb.

More than one billion pounds of federally-inspected poultry was turned out in 1955.

Recognition by both consumer and processor of the value and health-protection afforded by federal poultry inspection is perhaps the major factor in the big increase in the use of the service, USDA says.

USDA poultry inspection is handled on a voluntary basis. Processors must apply for the service, meet rigid requirements for plant construction, equipment and sanitation and pay a fee to defray costs of inspection.

THIS MOLASSES MIXER NEEDS NO CLEANING . . . EVER!

SECO'S TWIN MIXERS—in four sizes, from three to twenty tons per hour capacity. Hundreds of satisfied users prove molasses mixer cleaning is completely eliminated done FOR YOU by SECO's twin rotors with paddles that clean each other!

SECO's revolutionary design gives many other advantages, too:

1. Beating action that mixes better . . . no lumping . . . and molasses does not have to be heated. 2 Capacity up to ten tons per hour in the S-50 model (as shown) and twenty tons in the S-100 model—greater than most mixers costing twice the amount . . with variable speed auger feeder to handle all feeds in any amount. 3. Separate motor and pump to handle any consistency of molasses . . will not lose prime. 4. Adaptable to any installation . . . can be used with auger feeder (both vertical and horizontal) or fed direct from above.

The SECO Twin Mixers are sturdy, durable mixers that will give years of trouble-free, efficient service. They are backed by over twenty years of mill and manufacturing experience . . . by the very finest materials and workmanship . . and by a WRITTEN MONEY BACK GUARANTEE.

Please send free literature about SECO's Twin Mixers ☐.
Send literature about other mill equipment ☐.
Send information about protected dealer territory ☐.

Name_____ Firm_____

City_____ Zone_____ State_____

SOUTHERN EQUIPMENT COMPANY
GOODLETTSVILLE, TENNESSEE

Herman Nagel's Trace Mineral CONCENTRATE

Where only trace minerals are to be added, Herman Nagel's Trace Mineral Concentrate supplies all eight, in correct balance.

THE HERMAN NAGEL CO.
53 W. Jackson Blvd., Chicago 4, Ill.

This Advertisement

is now appearing in leading livestock and state farm papers—a new product announcement ... covering areas that produce more than 10 million cattle.

Now...New Life in Your Cattle Feed Sales, too!

with Swift

Yours from Swift, a great new feedlot development that provides new life for the digestive process itself . . . plus new life in your cattle feed sales, too.

Now SWIFT'S CATTLE PRIMER includes live rumen organisms by the billion to provide dramatic new efficiency with all kinds of feeds, especially with low-cost roughages.

- **New gains . . . up to 18% more on low-cost roughage.**
- **New fast start . . . cattle go on full feed in one-third the time.**
- **New uniformity . . . *all* your cattle thrive and bloom.**
- **New protection against digestive disturbances.**

Now you can stimulate lively appetites in cattle, cultivate your customers with low-cost gains and harvest a new record volume of cattle feed tonnage with Swift's new Cattle Primer, with live rumen organisms included. Call, write, or wire Swift & Company, Feed Department, Chicago 9, Illinois.

FEED DEPARTMENT • CHICAGO 9, ILLINOIS

Swift
101ST YEAR

A General Method of Calculating Amino Acid Requirements of the Broiler

By DR. R. S. GORDON
and DR. K. H. MADDY

EDITOR'S NOTE: *The authors of the accompanying article, affiliated with the Monsanto Chemical Co.'s animal nutrition research staff, describe a theory which predicts the requirement of broilers for any amino acid under varying dietary conditions. To date, the authors report, the theory has led to specific findings that the glycine requirement is higher than previously indicated, and further studies are expected to yield comparable information for other amino acids. This article is based on a paper presented by the two scientists at the annual meeting of the Poultry Science Assn. in August.*

Data reported previously (3) from this laboratory demonstrated that the methionine requirement of practical broiler rations could be calculated most accurately by making appropriate corrections for the dietary levels of both calories and protein. This paper presents data which suggest that this approach can be extended, making it possible to predict other amino acid requirements.

Table 1 summarizes the value at varying C/P ratios (calories productive energy per 1% dietary protein—N x 6.25) which most successfully predict the methionine requirement of broilers fed practical corn-soy rations. The dietary percentage requirement for methionine increases both with increased protein and increased caloric content. These values were established by correlating the growth response to various levels of MHA (registered trade mark of the Monsanto Chemical Co. for methionine hydroxy analogue calcium) and methionine when these compounds were added to broiler rations of "known" sulfur amino acid content. In general it was found that benefit from MHA or methionine was obtained chiefly in rations with a C/P of 41-47. Failure to obtain a beneficial response occurred principally when the C/P ratio was below 38-40, and it was assumed that in these rations dietary energy was the most important growth limiting factor. Failure to obtain a response when rations were of the order of C/P 48 or above led directly to the experimental assumption that in such diets not only methionine but other amino acids ought to be growth limiting as well.

Assume Same Influence

It seemed reasonable to assume that protein and energy levels would exert the same effect on the requirements of the other amino acids as on the methionine requirement. It was, therefore, also assumed that under the same conditions the requirement for the amino acids other than methionine would vary directly with the methionine requirement, based on the ratio of requirements as summarized by the National Research Council. The formula or proportion used is given in Table 2.

Table 3 indicates the application of these ratios. As an example, consider a diet containing 25% protein and sufficient productive energy to give a C/P ratio of 50. For the sake of comparison three systems for calculation of the methionine requirement are presented: the method, alluded to by Dr. Romoser (3), first reported for poultry by Baldini and Rosenberg, considers the methionine requirement as a function of energy only. As seen in the table, this dietary level of calories would require .67% methionine. Considering that the arginine requirement is 1.2%, the ratio .67/0.45 predicts that the NRC requirement (Xarg) of 1.2 should be raised to 1.8%. Similarly tryptophan

Table 1—Methionine Requirement as Per Cent of Protein Expressed as a Function of Calorie (Productive Energy) to Protein Ratio (C/P)

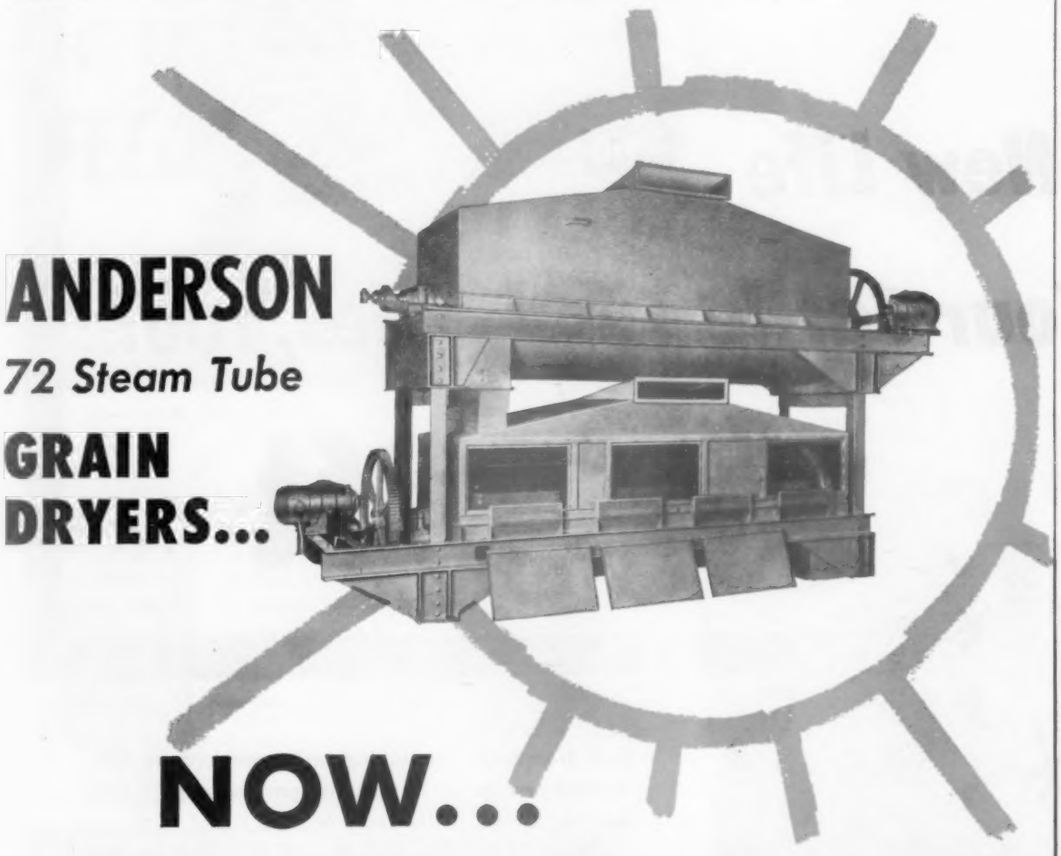
C/P Ratio	Methionine as % dietary protein
36-38	1.9
41-43	2.15
48-50	2.3

Table 2—Extrapolations of Methionine Calculations to Other Amino Acids

$$\text{Predicted Methionine Requirement} = \frac{\text{NRC Methionine Requirement}}{\text{Predicted Requirement AA (X)}} \times \text{NRC Requirement for that AA}$$

Table 3—Comparison of Three Systems of Calculating Amino Acid Requirements Based on Ratio of NRC Requirements

	25/50			
Method	Methionine	Arginine	Tryptophane	Lysine
NRC	0.45	1.20	0.20	0.90
Calorie	0.67	1.80	0.30	1.41
Protein	0.56	1.49	0.25	1.12
C/P	0.58	1.54	0.26	1.28
Average analytical value	0.48	1.48	0.38	1.41



ANDERSON
72 Steam Tube
GRAIN
DRYERS...
NOW...
FASTER DRYING AT LOWER COST

● Now you can dry whole and cracked corn, soybeans, oats, wheat, sesame seeds and other food products and granular materials faster and at lower cost. The new improved 72 tube dryer design with superior steam circulation and heat transfer assures uniform, efficient, fast drying of free flowing materials. This new dryer can be installed as a single unit or can be stacked 2 high or 3 high to suit your capacity requirements.

Anderson Dryers are the only grain dryers made with entire shell of steel plate rigidly supported by channel iron frames. Spiders and bearing supports are likewise of heavy construction and each unit is equipped with anti-friction bearings. We invite comparison of this Dryer, point by point, with any other dryer of any type on the market.

It costs less than you would expect to pay for such superior advantages. Let us give you data on the dryer best suited for your particular application. Anderson also manufactures a 42 tube Dryer for handling materials of a sticky nature such as copra, peanuts, flaxseed, etc. This unit has a gravity scraper feature which is outstanding.

ANDERSON

World's Largest Suppliers of Extraction Equipment

Mail this coupon
for complete information

THE V. D. ANDERSON COMPANY
Division of International Basic Economy Corporation
1944 WEST 96th STREET • CLEVELAND 2, OHIO

Gentlemen: Please send information on your dryers to meet the following requirements:

Name_____
Address_____
City_____ State_____
Material (s)_____
Initial Moisture_____ Final Moisture_____
Boiler hp. avail._____ Steam Pressure avail._____

FLAMBO FEEDS

MIXED FEEDS • PELLETS
CUBES • ROLLED OATS
CRIMPED OATS
ROLLED or CRIMPED BARLEY
FEEDING OATMEAL
OAT GROATS
PULVERIZED OATS

FOR SAMPLES OR QUOTATIONS—
Write, Wire
TELEPHONE 2325
TELETYPE PHILLIPS 8831

FLAMBEAU MILLING CO.
Phillips, Wisconsin

and lysine would be raised respectively to .3% and 1.4%.

The second method of calculating methionine ignores dietary levels of energy and considers methionine as a function of dietary protein only. This approach has been extensively studied by Almquist (1) and his students. He has found that the higher the protein level of the diet, the lower the methionine requirement is as a percent of dietary protein. This latter correction has been made in determining the methionine requirement as a percent of a 25% protein diet. It will be noted that the predicted requirements for the other amino acids based on an extrapolation from this estimate of the methionine requirement also represent increases above present NRC recommendations.

It should be pointed out as well, that both the NRC values as well as many of Dr. Almquist's results were obtained, in general, with diets containing an excess of energy, utilizing a semi-purified diet containing protein of high amino acid availability. While this suggests that the ratios of the NRC requirements are good approximations of the true requirements, it is entirely likely that greater amounts of amino acids will have to be furnished from the more complex protein sources found in practical rations due to the well-known lowered availability of the amino acids in such materials.

Third Method

The third method of calculating the methionine is the one which has been used most successfully in the Monsanto laboratory and, as indicated in Table 1, estimates the methionine requirement as a function of the ration's C/P. From Table 1 it is seen that the methionine requirement at a C/P of 50 is estimated to be about 2.3% of the dietary protein (2.3 x 0.25). By estimating the requirement of the other amino acids in a similar fashion to that described in the calorie method, it is seen that these extrapolations predict requirements increased above the NRC levels; but not to the same extent as predictions based on calories alone.

Average analytical values for each amino acid in the ration are given as determined by two or three different methods. All the various applications of the formula in Table 2 predict that there should be no need for supplemental levels of tryptophan or lysine, but all predict that a definite requirement exists for methionine. The only difference between the various extrapolations concerns the prediction of a large arginine requirement when no correction is made for dietary protein.

Similar calculations have been made for every one of the essential amino acids that have been reported to be required for the young, rapidly-growing chicken. In general, except for the discrepancies noted in Table 4, analytical values agreed fairly well with those reported in NRC publication 301. Using the values reported for feed ingredients, it was calculated that there should have been 3.4% glycine in the ration. However duplicate determinations by two different methods gave results averaging 1.46%. The dietary ingredients utilized in formulating the experimental rations were thereupon analyzed by three different methods including at least one chemical and one microbiological determination.

The major difference between the values reported in NRC publication 301 and these analytical values was found with soybean oil meal. The tabular value of 7.6% for 45% SBOM was corrected to 8.6% for 51% protein SBOM. As seen in Table 4, 2.70% glycine was found by chemical analysis and 2.64% by microbiological determinations.

As seen in Table 4, our theory predicts that the glycine requirement should be 1.28% in a 25/50 ration when the methionine requirement is predicted to be .58%. In a recent report to the National Research Council, Almquist recommended an increase in the NRC requirement of glycine from 1% to 1.5%. A recent paper by Fisher (2) also suggested the requirement of the chicken ought to be increased. The table compares the predictions based on both 1% and 1.5% as the requirement for glycine for a 20% protein diet. By the system described previously, this 25/50 ration ought to be deficient in glycine as well as in methionine and possibly in arginine.

Table 4—Predicted Glycine Requirement Compared to Glycine "Values"

		Predicted requirement
NRC		1.0
Calorie		1.49
C/P		1.28
Protein		1.24
		1.5
		2.23
		1.90
		1.86
		Glycine content
Ration:	Tabular*	3.40
	Found	1.46
SBOM:	Tabular*	8.6
	Found, Chemical	2.70
	Microbiological	2.6

*NRC Publication 301.

Typical Rations

Typical rations are presented in Table 5. When the 25/50 ration was

Table 5—Typical Compositions of Rations Utilized

	21/50	25/42	25/50
Corn	55.5	42.0	26.0
SBOM (51%)	26.0	34.5	37.0
Fish meal	3.0	5.0	5.0
Animal fat	6.0	9.0	22.5
Total	90.5	90.5	90.5

Constant ingredients, 9.5% (alfalfa, 3%; minerals, 3.5%; vitamins, 1%; whey, 2%).

LA BUDDE
MILWAUKEE, WIS.
MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 44 OTHER FEEDS

ADVERTISEMENT — This is a paid advertisement
Prepared by U. S. Industrial Chemicals Co.

U.S.I. FEED NEWS

Vol. III, No. 9 ★ A SERIES FOR SCIENTISTS AND EXECUTIVES OF THE FEED MANUFACTURING INDUSTRY ★ September, 1956

Feather Meal With Added Methionine Produces Good Growth Response

Feather meal fortified with high levels of methionine and certain other nutrients can replace other protein sources in eliciting a growth response in broilers, according to a report from USDA researchers.

The broilers were fed an all-vegetable protein diet to which an antibiotic, arsenical and folic acid were added, as well as two pounds of DL-methionine per ton of feed. An unidentified inorganic growth factor not attributable to the protein in feather meal is believed responsible for the growth stimulation.

The report bears out previous research which showed that feather meal could be added to broiler rations as a protein supplement, provided the diet has adequate levels of all essential amino acids, including methionine.

Chick Mortality Reduced by Pantothenic Acid

Cases of high chick mortality during the first week of life may be caused by an unsuspected pantothenic acid deficiency, a report from a leading eastern university suggests.

Symptoms may include listlessness and weakness, but excellent hatchability and no sign of pathogenicity. The condition was prevented by adding supplementary pantothenic acid to the breeding diet. Symptoms in newly hatched birds were also cleared up by feeding pantothenic acid.

The researchers believe that the inclusion of fat in poultry rations may increase the pantothenic acid requirement.

Research Reports Stress Importance of Antibiotic Activity in Intestinal Tract

Bacitracin Said to Remain Active Longest in Tract

A survey of recent research on antibiotics reveals the importance that leading nutritionists attach to fighting poultry and animal infections in the place where they first attack – the intestinal tract.

According to one expert, writing in a symposium on medicated feeds, ". . . it is generally agreed that the antibiotics act while they are in the digestive tract, and most investigators report that systemic infections are not adequately treated by oral administration of antibiotics." (A systemic infection is one that has already spread into the tissues.)

Bacitracin Remains Active

These findings add significance to previously published reports which show that, of the major antibiotics used in animal feeds, bacitracin remains in greatest concentration in the digestive tract. Tetracycline type "broad-spectrum" antibiotics are absorbed quickly from the intestine and thus are removed from the primary site of most low grade bacterial infections in poultry and animals.

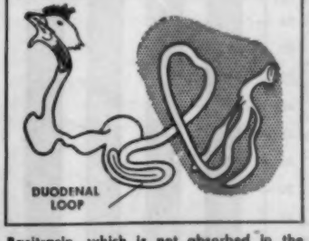
Bacitracin, on the other hand, has a heavy molecular weight and is not absorbed from the intestinal tract. It remains where its antibiotic activity is most needed.

Bacitracin Has Unique Activity

Bacitracin possesses another advantage over the broad-spectrum antibiotics: Because its action is selective it does not interfere with beneficial coliform bacteria which are known to synthesize B vitamins in the intestinal tract. Broad-spectrum antibiotics kill these beneficial bacteria.

In addition to its other advantages, bacitracin is more economical than tetracycline type antibiotics, making possible reductions of more than one-fourth in fortification costs. Bacitracin is produced by a natural fermentation, and when sold on a carrier of its own fermentation solubles it is a source of naturally produced B vitamins and other nutrients.

ONLY BACITRACIN PROTECTS ENTIRE DIGESTIVE TRACT



Bacitracin, which is not absorbed in the intestine, remains active throughout the entire digestive tract. Shaded portion of the diagram indicates the area of the digestive tract left relatively unprotected by broad-spectrum antibiotics, which are absorbed at the duodenal loop.

Concentrated BHT Available

In addition to offering a 25% BHT mix on distillers grains (See U. S. I. FEED NEWS, August), U.S.I. also has available a concentrated form of this antioxidant. The concentrated product, an agricultural grade of BHT, is a white, free-flowing powder that mixes readily with feeds and will not cake.

FEED PRODUCTS OF U.S.I.

- U.S.I. ANTIBIOTIC FEED SUPPLEMENTS (bacitracin and procaine penicillin)
- U.S.I. VITAMIN B_{12} SUPPLEMENTS
- U.S.I. MENADIONE MIXES (vitamin K_3)
- CURBAY® B-G 80, dried molasses fermentation solubles
- U.S.I. BHT MIXES
- SPECIAL LIQUID CURBAY® molasses distillers condensed solubles
- VACATONE® 80, molasses distillers dried solubles
- U.S.I. RIBOFLAVIN PRODUCTS
- U.S.I. CHOLINE CHLORIDE (25% dry or 70% solution)
- U.S.I. NIACIN
- U.S.I. CALCIUM PANTOTHENATE Products
- U.S.I. DL-METHIONINE (feed grade)
- U.S.I. PERMADRY (sealed-in vitamin A)
- U.S.I. VITAMIN D_3 (stabilized)
- U.S.I. CUSTOM MIXES (vitamins and antibiotics to meet your specifications)

BRANCHES IN PRINCIPAL CITIES

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers Products Corporation

99 PARK AVE.
NEW YORK 16, N. Y.

®Reg. U.S. Pat. Off.

COMBO JR. WATERER
Big cap. Cast Iron W or w/o elec. heat. Salesmen wanted. Only $6.37 up.
RHINEHART CO.
Ft. Wayne, Ind.

BAGS TO HOLD YOUR PRODUCT
DESIGNS THAT SELL IT!
COTTONS • BURLAPS • MULTIWALLS
PERCY KENT BAG COMPANY, INC.
Kansas City • Buffalo • New York

fed to New Hampshire, or New Hampshire-Indian River cross cockerels in replicate groups, as seen in Table 6, it was found that the average predicted level of methionine by itself did not improve growth although it is seen that the lower level of .05% did. However, when .3% glycine was added to the MHA or methionine (the predicted level) a 10% improvement in weight and feed efficiency was observed.

These results were sufficiently intriguing that attempts were made to determine the general applicability of this approach.

Table 7 presents the results of supplementing a 21/50 ration with the predicted levels of amino acids and analogs and summarizes the difference found between the basal ration and optimally supplemented ration. A weight difference of 120 grams (approximately 10%) and a feed efficiency improvement of .12 (about 6%) were observed at the end of the 50-day experimental period. Since nine replicate groups of 10-12 New Hampshire-Cornish cross were used, these differences were highly significant statistically.

Table 8 presents a summary of part of this same experiment and compares the average values resulting from adding amino acids and analogs to the basal ration in single or multiple combination. It can be seen that glycine or arginine alone had no significant effect. Furthermore when glycine was replaced with ammonium citrate or glutamic acid, growth was not improved above the growth produced by the combination of MHA and arginine in the absence of glycine. These two compounds were substituted for glycine on an isonitrogenous basis. Glutamic acid actually appeared to depress growth.

This table also compares the results of feeding supplemented and unsupplemented 25/41 and 21/50 rations. It is seen that although the 2-3% response to supplemental amino acids on the 25/41 ration was not significant, there was no significant difference between the growth on this ration and the 21/50 ration with all the predicted levels of supplemental amino acids. However, if one compares the unsupplemented rations, it is readily seen that the 25/41 basal produced significantly better growth than the 21/50 basal. Subsequent experiments have confirmed these findings, namely that optimum growth is more a function of amino acid balance than of any particular calorie to protein ratio.

Table 9 illustrates this point again and presents four week results from another experiment. It is seen that optimum growth on the 25/42 ration of 492 grams gain with a feed efficiency of 1.44 was matched only by those groups on the 21/50 ration receiving .18% MHA and 0.2% glycine (the levels predicted to be required). Further addition of arginine did not improve growth and in fact the birds required more feed for the same gain. It is also seen that MHA and glycine added singly or in combination at levels other than the predicted ones

Table 6—Effect of Supplementing a 25/50 Ration (2-4 Replicate of 12 NH Males)

Supplement	No.	Gain	Feed	F.E.
None	48	450	706	1.73
0.05% MHA	48	465	692	1.65
0.2% MHA	48	442	680	1.78
0.2% MHA + 0.3 Glycine	24	498	715	1.56

(27-day results.)

Table 7—0.3% Glycine, 0.2% MHA and 0.12% l-Arginine Value for 21/50 Diet

50-Day Gain Supplements		50-Day F. E. Supplements	
None	All	None	All
1241	1285	1.95	1.87
1234	1378	1.94	1.86
1178	1275	2.14	1.72
1224	1280	2.06	1.87
1134	1281	1.99	1.88
1269	1427	1.96	1.66
1225	1329	1.92	1.80
1296	1315	2.08	1.81
1184	1399	2.14	1.74
Ave. 1211	1330	2.02	1.89

Table 8—Value of Supplements for 21/50 Ration

Supplement	No. rep.	Ave. gain	F.E.
None	9	1211	2.02
MHA, Gly, Arg*	9	1330	1.89
Glycine (0.3%)	4	1198	2.10
Arginine (0.12%)	4	1232	2.01
MHA, Arginine	5	1277	1.99
MHA, Arg, DAC*	5	1259	1.94
MHA, Arg, G. A.	4	1126	2.16

Value of 0.05% MHA and 0.12% glycine when added to a 25/41 ration.

Supplement			
None	5	1276	1.90
0.05% MHA + 0.12% Glycine	5	1309	1.84

*MHA—0.2% Methionine Hydroxy Analogue.
Gly—0.3% Glycine.
Arg—0.12% l-Arginine · HCl.
DAC—0.45% Diammonium Citrate.
GA—0.6% Glutamic Acid.

(using the C/P method) were not particularly effective in improving growth.

Requirement Predicted

As far as it can be determined at this writing, if the value of 2.7 is utilized as the precentage content of glycine in a good soybean oil meal, glycine will be predicted to be required in broiler feed formulations, certainly whenever methionine is demonstrated to be required. In every case studied so far, little or no response was obtained from adding glycine alone unless the complete requirement calculated for methionine was essentially completely satisfied. Similarly when glycine is growth limiting, no response is obtained from MHA or methionine unless glycine was also added to the diet. Before the methods for calculating requirements for amino acids can be improved, it is obvious that better measurements of the relative rates of release of amino acids from the differing feed proteins, the relative rates of absorption and interaction of the amino acids, and the relative rates of clearance and excretion of the amino acids must be obtained. However, we feel that using information now available, one can estimate the true requirement of the young chicken for an amino acid within 10 or 20% of its value for diets of the practical corn-soy-fish meal type.

We can conclude that optimum growth can be achieved at differing protein/calorie ratios if the amino acids are properly balanced. We have suggested, as a first approximation, a method of predicting the requirement for any amino acid in practical corn-

Table 9—C/P vs. Amino Acid Balance??

Ration and supplements	Rep.	Gain	F.E.
21/50	5	474	1.61
" MHA (0.18%)	5	467	1.55
" Glycine (0.2%)	5	452	1.54
" 0.18% MHA + 0.2 Gly	5	497	1.46
" MHA, Arg (0.2%) + 0.2 Gly	3	477	1.51
" MHA, Arg + 0.4 Gly	3	507	1.54
" 0.05 MHA + 0.1 Gly	3	490	1.55
" 0.09 MHA + 0.2 Gly	3	480	1.56
25/42	5	485	1.47
" + 0.05% MHA + 0.1% Gly	4	497	1.44

Gly—Glycine.
Arg—l-Arginine.

Because stability alone is not enough—

PETER HAND DRY A

gives you

STABILITY PLUS AVAILABILITY

to help your feeds produce top results

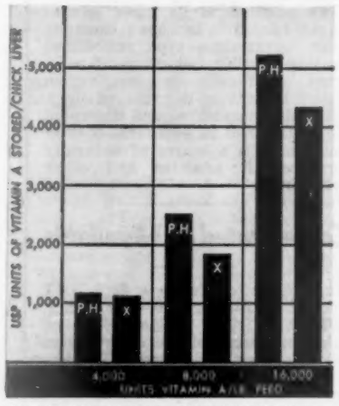
Of course your customers expect the vitamin content of your feeds to retain potency during storage—in the presence of heat, moisture, and trace minerals—in fact, right up to the moment of feeding. And *you* expect the same stability after pelleting—as well as complete dispersibility in the feed.

And the Peter Hand Foundation gives you these fine qualities in its Dry Vitamin A—and more, too. The vitamins you put into your mixes could stand up to pressure, heat and moisture till the cows come home—but they must also be readily assimilated by the animals that consume them.

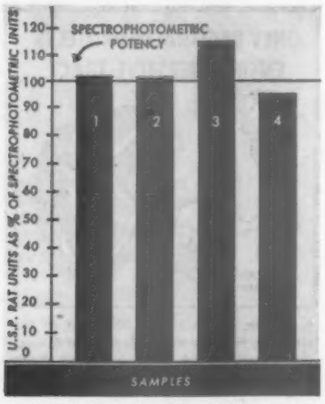
And so, Peter Hand has made sure of complete AVAILABILITY in its new and improved Dry A. Peter Hand Foundation's research staff approved the product only after exhaustive feeding and laboratory tests proved conclusively its stability and availability characteristics.

OTHER PETER HAND PRODUCTS

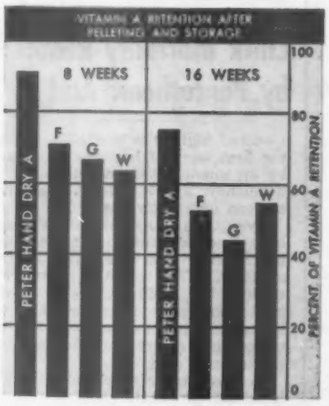
Dry D_3 and D_2 ● Vitamin B Blends
Vitamin B_{12} ● Antibiotics
Vitamin E ● BHT



Peter Hand A possesses more biological activity than a major competitive dry "Stable" product "X"—demonstrated in chick liver storage tests.



Peter Hand A possesses full biological activity: U.S.P. rat assays and rat liver storage assays agree with spectrophotometric assays.



The graph shows the % A retained during pelleting and storage. Products F, G, & W are the best obtainable competitive coated products.

Call, write or wire for prices

PETER HAND FOUNDATION

DIVISION PETER HAND BREWERY CO.

1000 W. NORTH AVENUE, CHICAGO 22, ILLINOIS • MOhawk 4-6300

CUSTOM PREMIXES—TO YOUR SPECIFICATIONS—AVAILABLE WITH SAME RIGID CONTROLS

SPLIT SECOND SERVICE

Place your next order with us. Call K.C. Baltimore 5115— Omaha Harney 4806.

BATES Grain Co.

Kansas City • Omaha

soy rations covering a wide range of protein and energy levels.

The data also suggest that glycine is the amino acid other than methionine principally required (by New Hampshire cross-bred cockerels raised in batteries under controlled environmental conditions). However, before more accurate predictions of the glycine requirement can be made, more accurate determinations of the glycine content of feedstuffs, principally soybean oil meal, are required. Recent reports indicate that the glycine requirement of the broiler should be revised upward to 1.5% of the diet at 20% protein. These indications emphasize our findings that the glycine requirement should be reevaluated under all feeding conditions.

Summary

A theory has been presented which predicts the requirement for any amino acid based on a relationship which takes into account the influence of both the calorie and protein level of the diet and which also suggests the need for a proper ratio between all amino acids. The proper ratio at this time appears best to be described by the ratio of the requirements as recommended by the National Research Council. Data from several battery experiments indicate that supplements of two amino acids, glycine and methionine, are required in practical diets. The described approach provides the most satisfactory method of correlating amino acid requirements with growth performance.

REFERENCES

1. Almquist, H. J.—Amino acid requirements of chickens and turkeys — a review; Poultry Sci., 31:966, 1952.
2. Fisher, H., Scott, H. M., and Johnson, B. C.—The role of glycine in chick nutrition; J. Nutrition, 55:415, 1955.
3. Gordon, R. S., and Maddy, K. H.—Problems in determining amino acid requirements. Informal Poultry Nutrition Conference, Atlantic City, N.J., April 15, 1956.
4. Romoser, G. L.—How far can broiler conversion go? Feedstuffs, July 14, 1956.

PREMIER PEAT LITTER

Premier absorbs up to **20** times its weight—
other materials absorb up to **5** times their weight
Premier absorbs up to **15** times more!

It is ABSORBENCY in litter that counts

- Absorbs quicker
- Saves work
- Lasts longer
- Final cost is less
- Resell as fertilizer
- Nationally advertised

Send for details now

PREMIER PEAT MOSS CORP.
535 Fifth Avenue, New York 17, N. Y.

Burlap or veneer

All plastic *inside & outside*

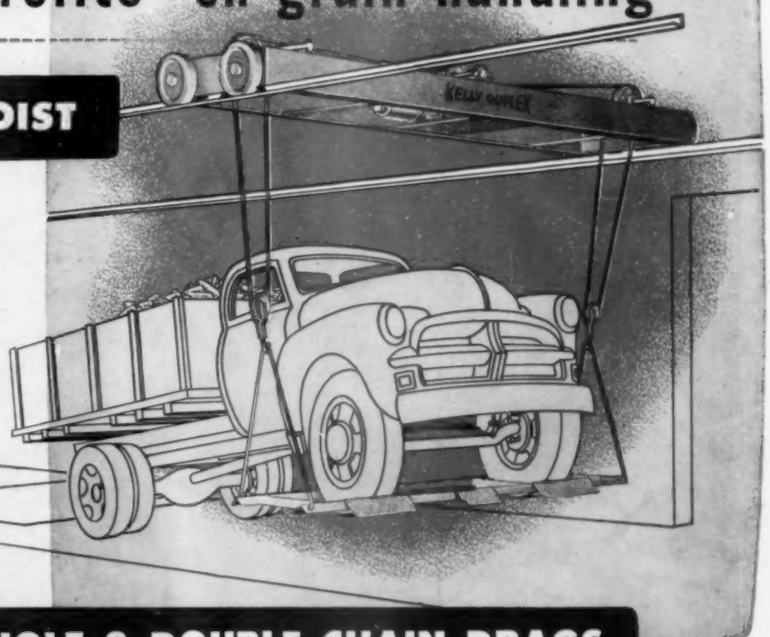
★ **Buy and Sell Through WANT ADS** ★

These KELLY DUPLEX machines work together to give you "extra profits" on grain handling

ELECTRIC TRUCK HOIST

Designed to unload trucks in less time and with less power . . . and ruggedly constructed to assure trouble-free performance and long life . . . the Kelly Duplex Electric Truck Hoist brings top speed, efficiency and economy to your grain handling operation.

All welded steel construction, tough steel cable, heavy duty motor and special gearing combine to lift loads with absolute ease and safety. Positive action switch controls all raising and lowering—lifts truck to any height up to 15 feet, stops operation instantly at any point, holds truck at desired angle for any length of time. The entire hoist moves freely on an overhead steel track (so flanged that wheels cannot "jump the track" regardless of stress) . . . can easily be positioned for unloading into any number of dump sinks. Available in any width and powered to meet your requirements, the Kelly Duplex Electric Truck Hoist is made to fit perfectly into your plant setup. Mail card for full details.



Kelly Duplex Double Chain Drag with variable speed control. This machine is grain-tight—has flared side boards for extra capacity.

SINGLE & DOUBLE CHAIN DRAGS

As grain dump drags . . . as conveyors . . . as feeders for hammermills, corn shellers or other machinery—Kelly Duplex Chain Drags are unsurpassed for steady, even delivery of grain and ear corn. Single chain drags have V-trough construction—choice of wood or steel box. Double chain drags are made entirely of welded steel—are available with 12", 16", 20" or 24" wide beds. All drags can be made in any length with either single or double gear reduction . . . can be powered by motor or belt drive . . . and can be furnished with variable speed control. Mail card for full details.

CLIP ALONG THIS LINE . . . FOLD OVER, FASTEN . . . AND MAIL TODAY!

FIRST CLASS
Permit No. 72
(Sec. 34.9 P.L.&R.)
SPRINGFIELD, OHIO

VIA AIR MAIL

BUSINESS REPLY ENVELOPE
No postage necessary if mailed in the United States

7c —POSTAGE WILL BE PAID BY—

The Duplex Mill and Manufacturing Company
Springfield, Ohio

FOLD OVER ON THIS LINE . . . FASTEN (STAPLE, GLUE, TAPE)

The Duplex Mill & Mfg. Co.
Springfield, Ohio

Yes, I'm interested in the KELLY DUPLEX machinery checked at the right. Please send me full information on these machines without any obligation.

- ☐ Electric Truck Hoist
- ☐ Twin Holeless Mixer
- ☐ Model "M" Hammermill
- ☐ Vertical Screw Elevator
- ☐ Corn Sheller with Blowers
- ☐ Pitless Corn Sheller
- ☐ Regular Corn Sheller
- ☐ Magnetic Separator
- ☐ Cob Crusher
- ☐ Corn Cutter and Sheller
- ☐ Chain Drag
- ☐ Vertical Feed Mixer
- ☐ Model "S" Hammermill
- ☐ Forced Air Carloader
- ☐ Corn Crusher—Regulator
- ☐ Grain Blower
- ☐ Corn Scalper
- ☐ Attrition Mill Blower
- ☐ Grain Feeder
- ☐ Electric Bag Cleaner
- ☐ Complete Line Catalog

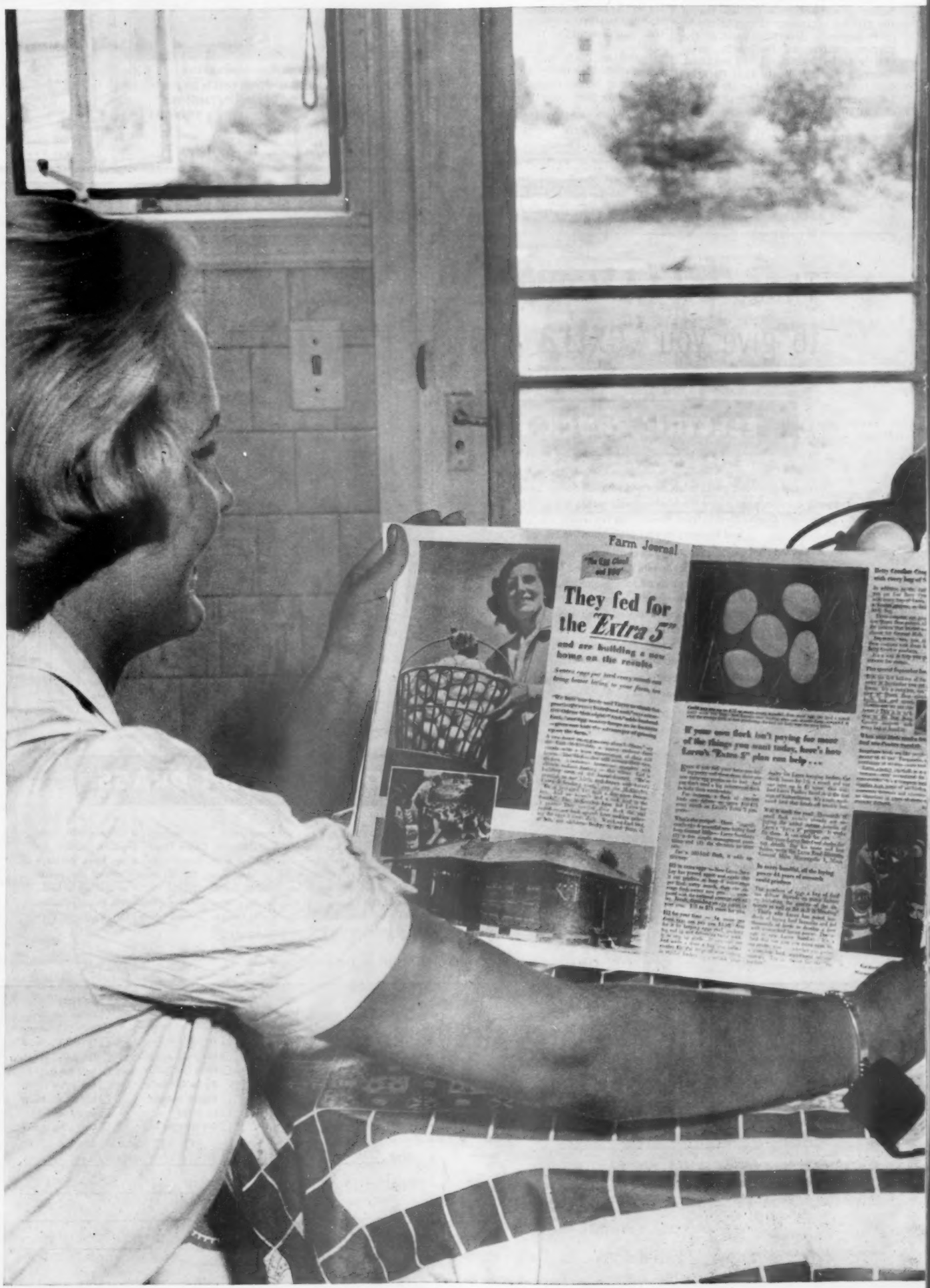
NAME_____

TITLE_____

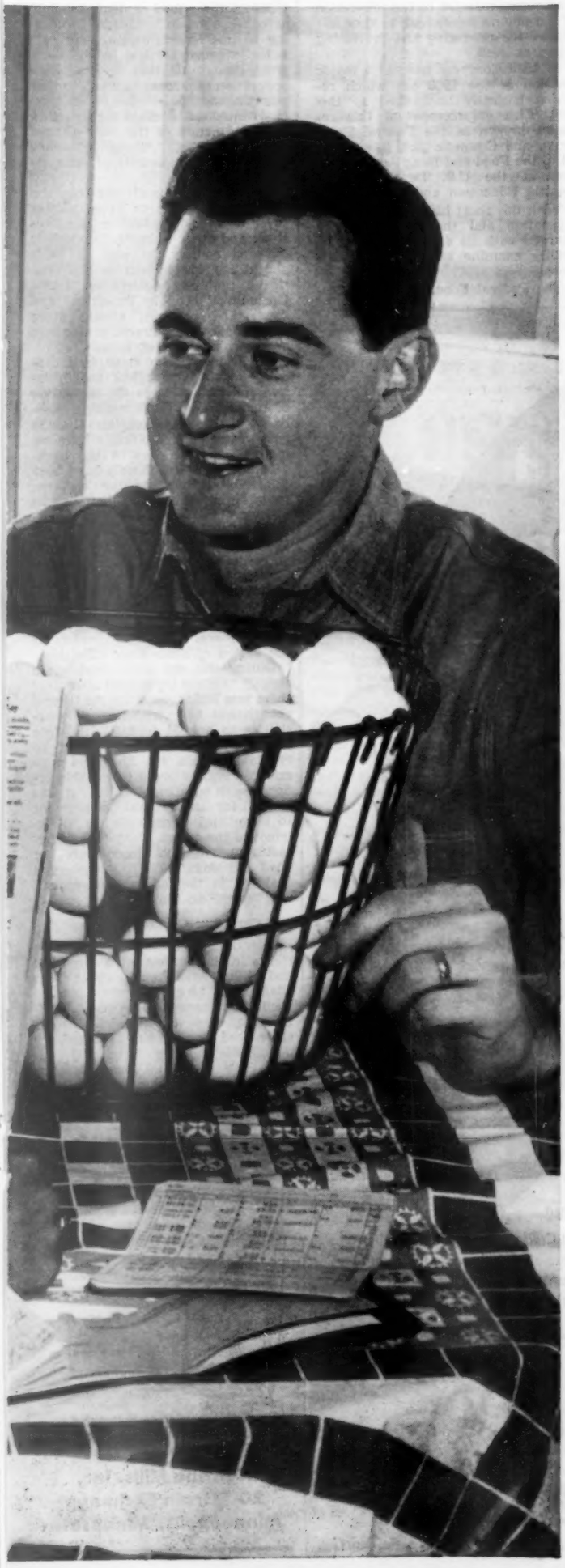
FIRM_____

CITY_____ STATE_____

GENERAL MILLS SELLS LARRO'S "EXTRA 5" PLAN


Farm Journal
They fed for the Extra 5"
and are building a new home on the results
If your own flock isn't paying for most of the things you want today, here's how Larro's "Extra 5" plan can help . . .

TO FLOCK OWNERS IN PAGES OF FARM JOURNAL



This advertisement for Larro SureFeed which appeared in a recent issue of Farm Journal told flock owners how feeding for the "Extra 5" means larger egg checks and healthier layers. Why do the leading producers of feedstuffs advertise in Farm Journal?

For years Farm Journal has been America's largest selling farm magazine. It reaches and influences more farm families than any magazine published.

Advertising in Farm Journal makes your job easier by preselling your best customers and prospects. With its 3,400,000 circulation, it reaches more than twice as many farm families as any other farm magazine. Its readers are the best customers of feed dealers across the nation.

Advertisers have confidence in Farm Journal, because it's the magazine farm families have confidence in. Feed dealers like it, too, for the solid sales support it gives them locally—Farm Journal goes down the rural routes in the better farming areas much like a local newspaper.

Here's what some Larro SureFeed dealers say:

- It would be hard to find any poultrymen around here that don't read Farm Journal. I'm for it 100%. I read it; it keeps me posted on what's going on. *J. Henry Clusman, Baltimore, Md.*

- We're glad to see advertisements running in Farm Journal. Keeps the sales coming in. *William Daily, Daily and Son, Fremont, Nebr.*

- Anybody in the feed business knows that it helps to have advertising backing in Farm Journal. I know that it helps me. *Charles Medica, Medica Feed Store, Napa, Calif.*

People like to read advertising in magazines

Farm Journal

The Magazine Farm Families Depend On

GRAHAM PATTERSON
Publisher

RICHARD J. BABCOCK
President

Importance of Medicated Feeds to the U.S. Food And Drug Administration

By Dr. John H. Collins

EDITOR'S NOTE: The importance of medicated feeds continues to grow, and in this article an official of the U.S. Food and Drug Administration deals with the regulation of medicated feeds. The author, Dr. John H. Collins, is veterinary medical director, Bureau of Medicine, Food and Drug Administration. Dr. Collins explains how medicated feeds come under federal law, and he describes some of the control problems in connection with medicated feeds. He also comments on feed manufacturers' problems in the production of these feeds. This article is from a talk by Dr. Collins at the Minnesota Animal Nutrition Short Course at the University of Minnesota, St. Paul.

The year 1956 is the 50th anniversary of the first federal legislation to insure the integrity and purity of foods and drugs in this country. The first law, known as the Pure Food and Drugs Act, was signed by President Theodore Roosevelt on June 30, 1906. Although it had to be amended occasionally to keep pace with new developments and continuing progress, it has been hailed as the first major step forward in the protection of the buying public and, as time has shown, the producing and processing seller as well.

In 1938 Congress enacted a major revision of the 1906 act which remains basically unchanged to this day. The enforcement of this revision, known as the Federal Food, Drug, and Cosmetic Act, is entrusted to the Food and Drug Administration of the U.S. Department of Health, Education and Welfare.

With this short history of the basic legislation and the federal agency charged with its enforcement, let us briefly examine some of its provisions.

The Federal Food, Drug, and Cosmetic Act is not a "feed law" per se. It contains no provisions dealing specifically with animal feeds or with animal drugs. However, its provisions fortunately cover feeds and drugs intended for use in animals as well as foods and drugs for humans. The act says that a "food" means "articles used for food or drink for man or other animals." "Drugs," according to this federal statute, are "articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals, and . . . articles (other than food) intended to affect the structure or any function of the body of man or other animals." These definitions also include components of such articles.

Nothing could be clearer than the intent of Congress to have this act cover feeds and medications for livestock and other animals, in which is included poultry, as well as foods and drugs for human beings. The statute prohibits adulteration of food (including "feed" by definition) and drugs and requires, among other things, adequate directions for use and warnings against misuse.

Traditionally, the state feed control officials have taken the initiative and leadership in the regulation of animal feeds. While working closely with the state officials through past years, federal officials have remained more or less in the background. The state officials have been primarily responsible for assuring feeders that the feeds they bought were properly prepared and accurately labeled. Until only about 10 or 12 years ago, regulatory activities under federal law were largely limited to actions designed to supplement the work of states, particularly in those relatively rare cases where the broader jurisdiction of the federal law was needed to implement the action of some state official.

During this era when feeds were strictly "for the birds (and animals)" there was little reason for the federal government to extend its police activities to animal feeds. With state feed laws, specifically designed to regulate protein, fat, fiber and mineral content, enforced by capable officials with excellent facilities, it was logical for the federal government to leave major responsibility in the hands of the states. Many feed manufacturers will say, "those were the good old days." I can assure you that we, in the federal government, say "amen" to that!

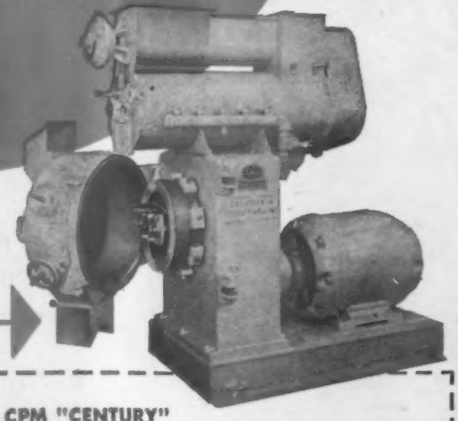
Changing Control Problems

Scientific discoveries and developments in the production of livestock and poultry have brought about great changes in the pattern of control problems. These changes could hardly have been foreseen when most state feed laws were enacted, or during the 32 years of the 1906 Federal Pure Food and Drug Law, or even when the Federal Food, Drug,

More California Pellet Mills are Sold today than all other makes Combined

LOWEST MAINTENANCE COST
BEST SERVICE
"DIRECT-THRUST" DIES
QUALITY WORKMANSHIP
LOWEST OPERATING COST
TRAINED, COMPETENT PERSONNEL
HIGHEST CAPACITY

Why?



CPM "CENTURY"
Call your nearest California representative today for complete information. Whatever hourly pellet capacity you want, there's a California Pellet Mill that is just right for your requirements.

CPM CALIFORNIA PELLET MILLS
CALIFORNIA PELLET MILL COMPANY
Best by Every Test!
1800 Folsom Street, San Francisco 3, California
1114 E. Wabash Avenue, Crawfordsville, Indiana
101 East 15th Avenue, North Kansas City 16, Missouri
Sales & Service Representatives also in: Atlanta • Buffalo • Denver • Fort Worth • Harrisburg • Memphis • Minneapolis • Omaha • Seattle • St. Louis

Here's Nutrena's Business-Dealer Formula!

1. Develop "Leader" Feeds
2. Promote those feeds hard
3. Back our dealers to the hilt

Get full information on Nutrena's Business Feed Dealer expansion program. Write to:

Nutrena Mills, Inc.
200 Grain Exchange
Minneapolis, Minnesota

and Cosmetic Act became law in 1938. The commercial availability of specific nutrients, such as vitamins, in pure or highly concentrated forms, the advantages of flock and herd medication by adding drugs to the basic feed formulas, and the expanded use of other chemical additives, such as antioxidants, all have made necessary a readjustment in the roles that the federal government and the various state governments must play in meeting their joint responsibilities in this field.

To those of you who wonder why the Food and Drug Administration in the enforcement of the Federal Food, Drug, and Cosmetic Act is playing a more prominent role in regulation of the feed industry, I would like to emphasize the national importance of medicated feeds. This class of products presents numerous and highly complex scientific and technical problems. There are also major economic questions involved, not only for manufacturers but for farmers, meat packers and consumers. Some of these have not been fully resolved. Over and above all, however, looms one paramount consideration: the protection of the public welfare. This is the basic concept of all food and drug legislation. Medicated feeds cannot be viewed simply in terms of their economic or medical effects on poultry and dairy products, pork, veal and beef. All of us must primarily be concerned with the question of whether the food for man obtained from treated animals could possibly have any adverse effects on the human consumer.

No doubt most of you are aware that several sensational periodicals seem to take particular delight in publishing fantastic scare stories about the dire consequences to be expected from eating food derived from animals which have been treated with certain drugs and chemicals. The favorite "whipping boy" for this segment of the public press is diethylstilbestrol, whether implanted in an inedible part of poultry and steers or fed to cattle in feed-lot rations. Fantastic as these stories appear to be, all of us, drug manufacturers, feed manufacturers, the livestock and poultry industries, public health officials and state and federal regulatory officials alike, would be distressed and shocked should one of them ever turn out to be true.

The Food and Drug Administration, of course, has employed every precaution possible under the provisions of the Federal Food, Drug, and Cosmetic Act to protect the nation's food supply from adulteration with drug or chemical contamination. Illustrative of this is a notice which we had published in the Federal Register of December 4, 1948. This notice reads in part as follows:

"In considering a new-drug appli-

(Continued on page 49)

Sell your CUSTOMERS "SNOW FLAKE" OYSTER SHELL for MORE EGGS and HEALTHIER HENS

Send for SAMPLES and QUOTATIONS

Phone OR 2-9441

WRITE WIRE PHONE

MAYO SHELL CORP.

P. O. BOX 784 • HOUSTON, TEXAS

OVER 100 YEARS OF EXPERIENCE IN MAKING ONLY QUALITY BAGS

CHASE TOPMILL BURLAP"

• Imported from the finest mills of India and Pakistan, Chase TOPMILL Burlap combines good looks, strength, and uniformity. CHASE Burlap Bags look better, last longer, and assure better product protection. And that's no yarn.

Samples and current prices available from any Chase office

CHASE BAG COMPANY

309 W. Jackson Blvd. Chicago 6, Ill.

Lilly REPORT TO THE FEED INDUSTRY

Heifers gain 3 lbs. per day with 'Stilbosol' in ration

By Eugene S. Hahnel

On his 320-acre farm near Verdon, Nebraska, Dick Heineman has proved to his own satisfaction that 'Stilbosol' is all that's claimed for it.

About the first of January, 1955, Dick put 40 head of heifers into drylot. For 100 days he fed them shelled corn, a commercial supplement fortified with 'Stilbosol,' and baled alfalfa hay. The heifers averaged 600 pounds when they went in, 900 pounds at market, for a net gain of 300 pounds each . . . or 3 pounds gain per day.

Another bunch of 35 mixed steers and heifers were brought in on March 15. They were grassed while being brought gradually up to full feed. On July 4, they were put in drylot and finished off on a full grain ration, balanced with a commercial 'Stilbosol'-fortified supplement. The average daily gain for the entire period, pasture and drylot, was 2¼ pounds. They were on full feed only 70 days.

Lower Cost of Gain

Dick Heineman was introduced to benefits of 'Stilbosol' by his feed manufacturer. Here's how he puts it: "My manufacturer gives me good advice on cattle feeding. 'Stilbosol' is just one example of how they keep me up to date on the latest cattle feeding information. 'Stilbosol' has helped me in my cattle feeding by lowering the cost of gains."

Dick Heineman has been feeding cattle for 6 years. He now has his third bunch of cattle on 'Stilbosol.' Dick Heineman's story will be read by beef feeders across the country in Lilly ads in 15 farm magazines.

Otto Gossman (right), feed manufacturer's representative, helps Dick Heineman figure extra gains and lower feed costs for their third group of cattle fattened on his company's 'Stilbosol'-fortified supplement.

Lilly products for the feed industry

PROCAINE-PENICILLIN-G
CALCIUM PANTOTHENATE
VITAMIN B_{12}
'STILBOSOL'

'Stilbosol' is sold only to the feed manufacturing industry

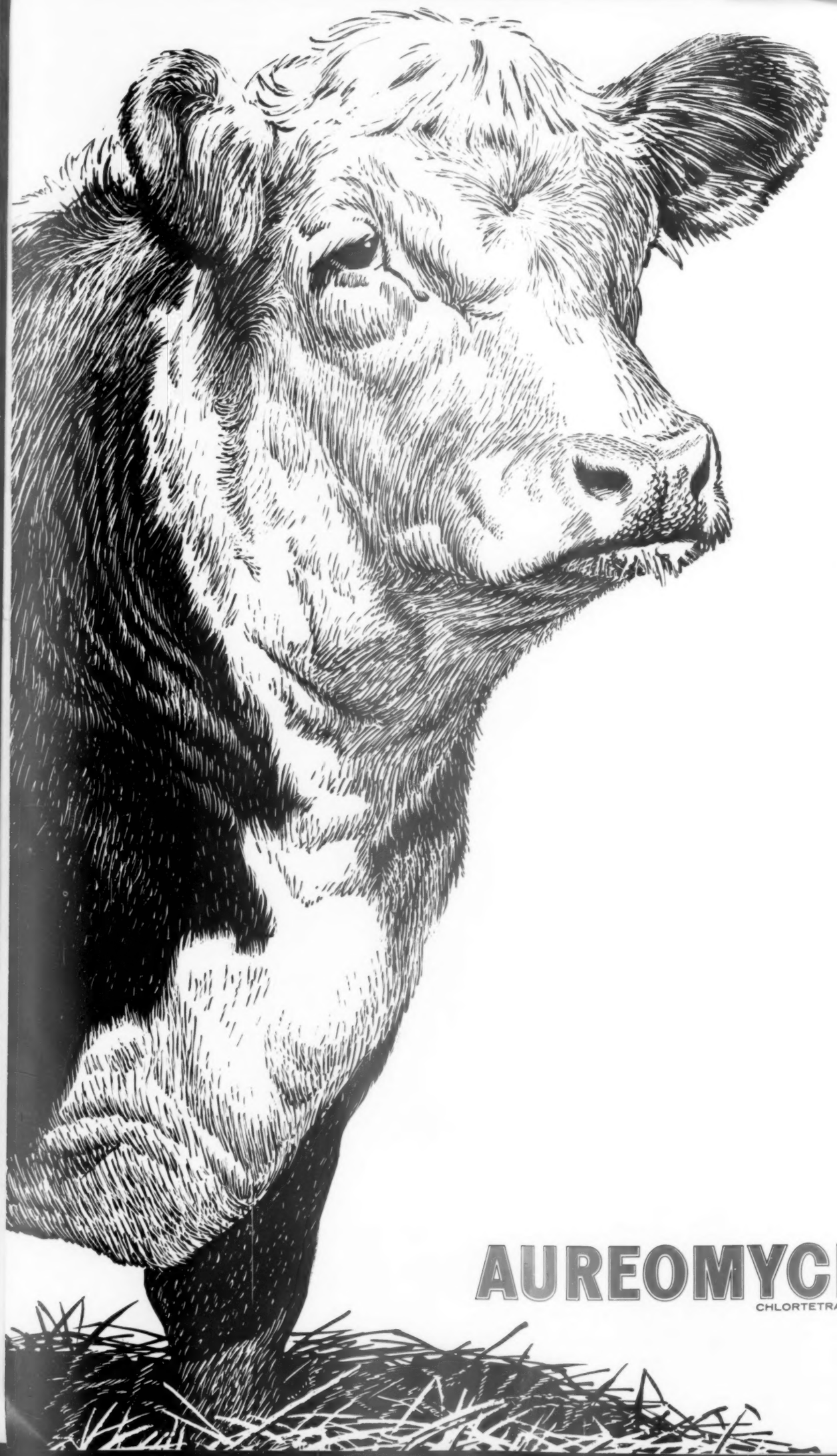
• 1876 - Eightieth Anniversary - 1956 •

Stilbosol
(Diethylstilbestrol Premix, Lilly)

Lilly

'Stilbosol' is Eli Lilly and Company's trademark for Diethylstilbestrol Premix which is manufactured and sold under exclusive license granted by Iowa State College Research Foundation, Inc., under its U.S. Patent No. 2751303.

ELI LILLY AND COMPANY, AGRICULTURAL PRODUCTS DIVISION, INDIANAPOLIS 6, INDIANA



...in 3 y

AUREOMYCIN® for

CHLORTETRACYCLINE

PROVED

ears of use as the antibiotic that provides

CHEAPER GAINS

Your customers for cattle feeds can start getting cheaper gains right now with rations containing AUREOMYCIN Chlortetracycline

AUREOMYCIN protects cattle from disease—gives them more vigor to withstand stresses of weather, shipment, changes in environment.

AUREOMYCIN helps cattle *go on* feed faster and *stay on* feed.

AUREOMYCIN keeps cattle doing well—with fewer sickness days, less respiratory troubles, more "bloom."

AUREOMYCIN assures extra pounds of beef at market—provides the cheap gains cattle feeders need to make a profit.

AUREOMYCIN returns your customers as high as $9 in feed savings alone—for every $1 invested in feeding it.

These are facts *proved* in field and experiment station trials over the past 5 years—and by cattle feeders who have been using AUREOMYCIN for the past 3 years.

Recommend this proved antibiotic to your cattle feeders for more dollar returns on their cattle! American Cyanamid Company, Animal Feed Department, 30 Rockefeller Plaza, New York 20, N. Y.

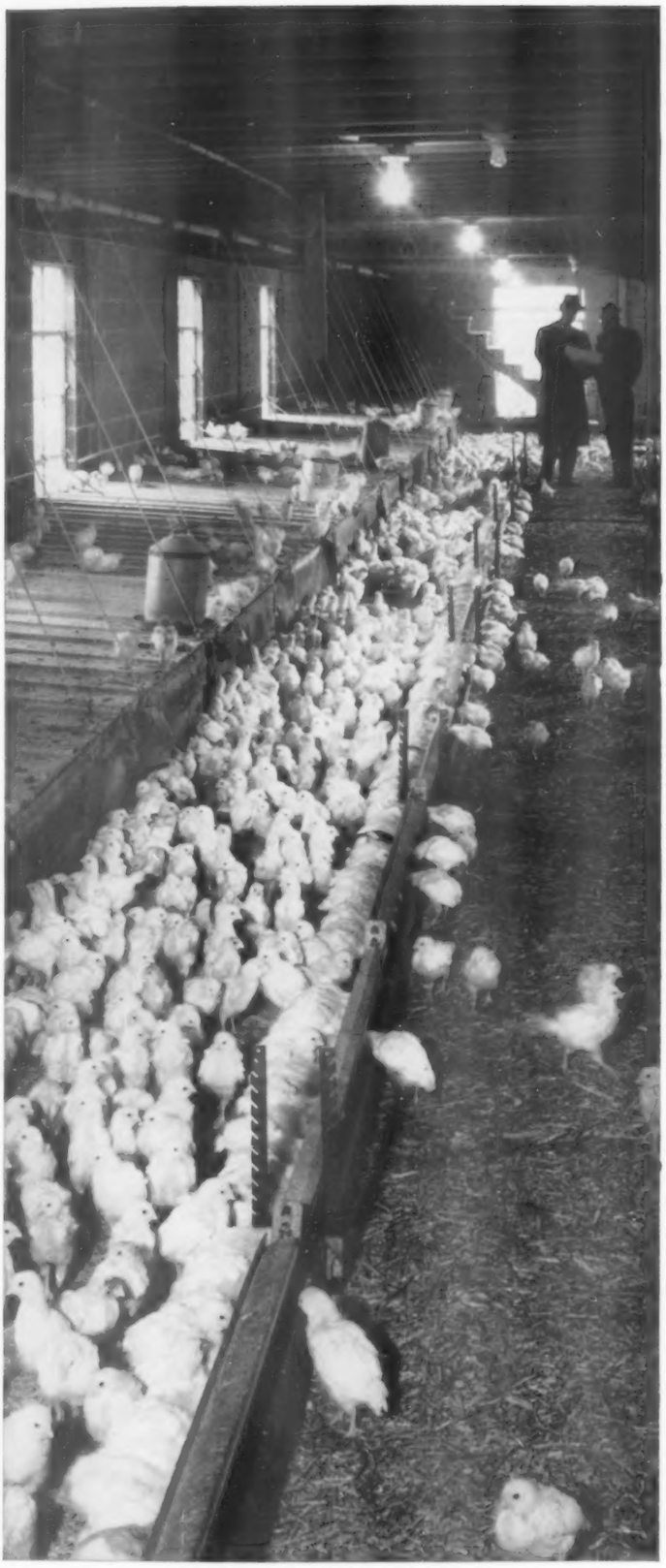
Beef Cattle

CYANAMID

WHEN IS A SUPPLEMENT EXPENSIVE?

Can you afford to judge a supplement by its first cost?

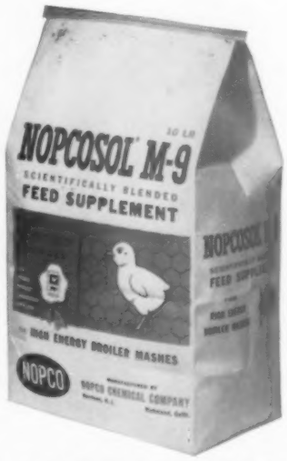
Or is it wiser to judge it by results?



Nopcosol® M-9 is not the lowest priced supplement on the market. (It is by no means the highest priced, either.) But, judging Nopcosol M-9 by the results it brings, can you afford to do without it? Can you afford to give your customers anything less than fast, uninterrupted growth, early market weight, efficient conversion rates, low mortality, and a modern, profitable broiler operation? Can you risk losing repeat business?

Nopcosol M-9 is a *complete* vitamin-antibiotic-trace mineral supplement geared to today's high-energy broiler mashes. It provides optimal—not minimal—levels of essential supplementary vitamins, and includes newer factors such as vitamin E, vitamin K, arsanilic acid, and methionine. Vitamins A and D are Micratized,® thus permitting us to *guarantee* full vitamin potency when your feed fortified with Nopcosol M-9 is fed.

If you haven't already seen it, perhaps this is the moment to take a hard-headed look at the Nopcosol M-9 formulation. Send for the Nopcosol booklet and discover how to mix money-making feeds.



Nopcosol also comes in specific formulations for swine and for all types of commercial poultry.

NOPCO

NOPCO CHEMICAL COMPANY
Harrison, N.J. and Richmond, Calif.

NOPCO CHEMICAL COMPANY
100 Front Street
Harrison, N.J.

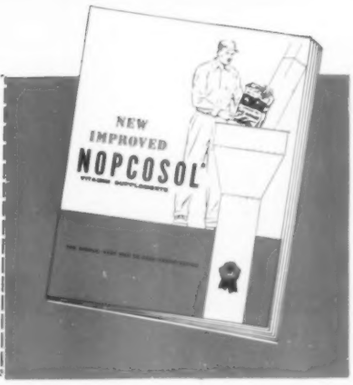
Please send me the Nopcosol brochure.

*Name*_____

*Firm name*_____

*Address*_____

*City*_____ *Zone*____ *State*_____



Basic producers of Micratized Vitamins A & D, niacin, calcium pantothenate, choline chloride, and other products

cation for a product intended to effect physiological changes in farm animals, the Federal Security Agency (now the U.S. Department of Health, Education and Welfare) will regard the absence of satisfactory evidence showing that the meat or other food obtained from animals fed the drug is entirely free of any poisonous or deleterious ingredient resulting therefrom at the time of marketing as ground for refusal to make the application effective."

Since all drugs which are added to animal feeds or which are implanted or injected into animals for a physiological effect are, or have been at some time in a new-drug status, this position means that no person who plans to manufacture and sell such products may do so legally until he has convinced us with irrefutable data that his proposed practice will not affect the safety of our food supply. We think decisions in this field to date have been reasonable and scientifically sound. We also appreciate the fact that the drug and feed industries generally have assumed their full share of the over-all responsibility to the consuming public by developing research data for scientific scrutiny and evaluation and by providing labeling information which clearly identifies any particular product, how it must be used and, when deemed necessary, warnings against the consequences of misuse. All of this points up, I think, that charges of general indifference to the public welfare on the part of government and industry are unwarranted and irresponsible.

Production Problems

There is an area in the production of medicated feeds in which the regulatory officials can do little or nothing beyond educating all parties directly concerned and sounding a warning about potential trouble. Improperly informed feed manufacturers who use common facilities for making various types of medicated feeds, as well as non-medicated feeds are the probable innocent offenders and victims in this area. Accidental contamination of other feeds (medicated and non-medicated) by inadvertent poor handling of dust collections and clean-outs from batch runs of certain medicated feeds can be very costly to the manufacturer and the feeder. Not only does it involve more meticulous attention and supervision at the feed mill but customers who have suffered losses from undeclared, unsuspected and unwanted drug contamination will demand compensation even if they have to file damage suits to recover the loss. In many instances, however, monetary considerations do not compensate the actual loss.

We know of one research investigator who has to repeat almost a full year's work on a vitamin project because, toward the end of his experiment, estrogenic stimulation from the diet became evident in his mice. A large Eastern feed manufacturer told me that he had to reimburse several egg producers because of financial losses due to a potent poultry coccidiostat in his feeds for laying hens. This drug which is never used in laying rations was carried over from broiler rations previously mixed in the common mixers. He now prevents these occurrences by collecting the dust from mixers and sending a clean-up man down into the hoppers used for processing and holding medicated poultry feeds before running through any other type feed.

I don't believe anyone could present a stronger argument for the importance and necessity of rather frequent chemical or biological assays of finished medicated feeds for checking the presence of declared drug ingredients in correct amounts and the absence of contaminants in any amount.

Too little of a required drug ingredient might seriously impair efficacy with reduced performance of the product. Too much of the same drug could be harmful from a toxicity standpoint in addition to being a costly waste of perhaps a very expensive ingredient. Therefore, the feed manufacturer owes it to himself as well as to his customers to pay special attention to the production of medicated feeds in order to stand squarely back of the guaranteed potency and purity of his products. This, of course, requires proper assays of batches at reasonably frequent intervals.

Proper labeling of medicated feeds has been the subject of several joint meetings of feed manufacturers and state and federal regulatory officials. Feeders as well as feed manufacturers will be glad to know that considerable progress was made at one of these meetings held in Washington, D.C. on July 11, 1956. General agreement was reached among those present on two types of medicated feed labels which combine propriety and simplicity. (Feedstuffs, July 14 and 21.)

Do Your Feeds Have These
3 essential Ingredients?

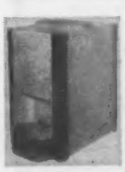
SAFETY Guaranteed Potencies! No Chance for Spotty Distribution!

SERVICE Latest Nutritional Advancements . . . Free Formula Service!

SATISFACTION Customers repeat! Your feeds give efficient high production at low cost!

Write Today For The Safe, Sure Answer To Your Fortification Problems

Blatchford's
ESTABLISHED IN 1900
MAIN PLANT & OFFICES Midwest Plant West Coast Division
WAUKEGAN, ILL. Des Moines, Iowa Nampa, Idaho



COMBO WATERER

Cattle, Hogs. 20 gal. Fiber Glass tub top. 1 gal. Cast Iron hog drinker. Electric heat. Therm. control. Salesmen wanted. Price $32.50 up.

RHINEHART CO.
Ft. Wayne, Ind.

Use FEEDSTUFFS Want Ads for RESULTS

What you want
When you want it!

FROM Albemarle's vast timberlands, pulp mills and bleaching plants to the final production of Raymond Multiwalls, strict technical control assures the complete protection of every "bagable" product . . . Papers of all descriptions including a wide range of specialties adapted to individual needs . . . Any number of plies . . . Clean, radiant printing . . . And of special importance, quick deliveries always.

RAYMOND BAG CORPORATION
Albemarle Division of PAPER MFG. COMPANY
Middletown, Ohio • Richmond, Va.

Raymond
MULTIWALLS

Mitchell, Hutchins & Co.

. . . can help make your business operations safer by protecting you against market fluctuations and inventory losses.

HEDGE your soybeans, soybean oil and soybean oil meal in the futures market. It's the inexpensive way to take the risk out of your ingredients.

Call, wire or write us today for information.

ARTHUR C. HARRISON
Partner in charge of Commodity Department

One Wall St.
New York 3
Digby 4-0700

231 S. La Salle St.
Chicago 4, Ill.
ST. 2-1700

MEMBERS
Chicago Board of Trade
Memphis Board of Trade
New York Stock Exchange
and Other Principal Commodity and Security Exchanges

GRAIN MAN SPEAKS—Four speakers at the ninth annual commodity markets symposium held under the sponsorship of the Chicago Board of Trade in September are shown above. At the left is Frank A. Theis, president, Simonds-Shields-Theis Grain Co., Kansas City, who warned of the undesirable aspects of government in the grain trade. Other speakers were Prof. Robert Holloway, University of Minnesota (second from left) and Richard Williams, vice president, Buckeye Cellulose Co. (third from left). At the right is Franklin J. Lunding, chairman of the board, Jewel Tea Co., dinner speaker on Sept. 6.

Grain Man Criticizes Government's Role in Business at Chicago Symposium

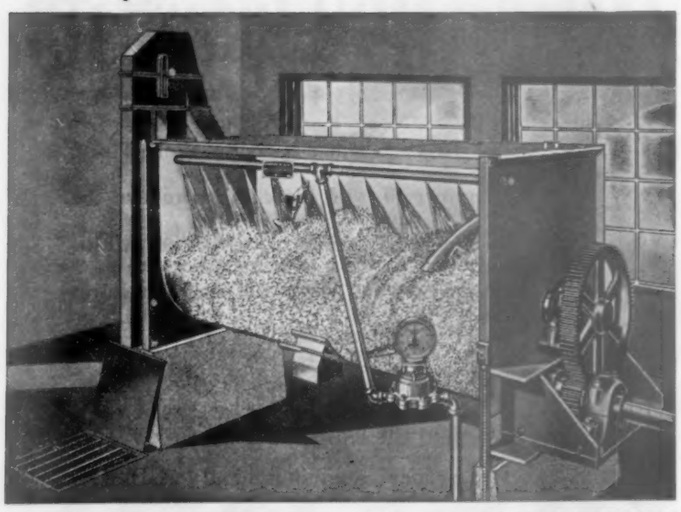
CHICAGO — "Government-in-business always sets up more and bigger problems than it corrects, and the first and most important job facing the U.S. grain trade today is to free itself from government domination." That was the warning issued here recently by Frank A. Theis, president, Simonds-Shields-Theis Grain Co., Kansas City, in a talk given at the ninth annual Commodity Marketing Symposium sponsored by the Chicago Board of Trade.

Other speakers included W. C. Schilthuis, executive vice president, Continental Grain Co.; Richard Williams, vice president, Buckeye Cellulose Co., and Earl M. Hughes, former director, Commodity Stabilization Service. The symposium was attended by educators from 50 leading colleges and universities in the U.S. and Canada.

Mr. Theis pointed out that 73% of all grain in commercial terminal elevators on March 15 this year was stored for the government. This has given some grain warehousemen a vested interest in state owned surpluses and hypnotized them into letting favorable short term earnings condone government participation and interference that will lead to inevitable ruin when bureaucrats move in full force, he said.

"Country grain warehousemen have

MIX WITH THE *Marion* MIXER!



CONSTANT UNIFORMITY IN MOLASSES MIXING

World's most TROUBLE-FREE Molasses Mixer. Materials are mixed, blended and cross-blended constantly — away from the ends, toward the center for the most uniform mix possible. Handles toughest mixes.

NO DOUBT . . . NO GUESSING
COMPLETE ACCURACY IN MIXING

MIXES WET MATERIALS
- Molasses Feeds
- Fish Solubles
- Oils
- Hay and Molasses

MIXES DRY MATERIALS
- Dry Feeds
- Fertilizers
- Trace Minerals
- Alfalfa Blending

FILL OUT and MAIL NOW

RAPIDS MACHINERY CO.
887 11th St., Marion, Iowa
Please send me complete descriptive catalog

NAME .....
ADDRESS .....
CITY ..... STATE.....

Selling Ideas

FEEDSTUFFS has prepared a 16-page Merchandising Handbook for feed dealers interested in getting a greater volume of sales and profits from animal and poultry health products. In the Handbook will be found practical merchandising ideas successfully used by retail feed stores. Read how health products sell more feed. Order now!

20c per copy
Send coins if order is under $1

PRICE DISCOUNTS are available to firms desiring to use their own advertisement on the back cover on orders of 1,000 or more copies. Get complete details. Write to:

FEEDSTUFFS
Merchandising Handbook
Box 67
Minneapolis 1, Minn.

UHLMANN AWARDS—Winners of the 1956 Uhlmann Awards national grain marketing essay contest announced during the Chicago Board of Trade's ninth annual symposium on commodity marketing recently are shown above. Allan D. Richards, Iowa State College, and William Goodale, Northwestern University, receive cash awards from Richard F. Uhlmann, president, the Uhlmann Grain Co., co-sponsor of the contest. It was the second time Mr. Richards has won first place in the contest. A paper he entered while a student at Montana State College was the winner in 1954. Mr. Richards this year won in the graduate division, Mr. Goodale in the undergraduate division.

bad dreams when they consider the threat of the billion-bushel storage capacity of government owned steel bins. The whole threat of government in our business is so wide that each segment of our industry can well afford to support the effort needed for self protection," Mr. Theis continued.

"The present danger to our markets is not from public criticism, but from government participation in the grain business to an extent that wipes out the customary use of the markets," he concluded.

Mr. Schilthuis reported that the International Wheat Agreement as a means of facilitating sale and purchase of wheat in the export trade has been considerably weakened. It has been weakened by abundance of wheat in exporting countries and unwillingness of importing countries to buy their guaranteed quantities at prevailing prices, he said.

According to Mr. Williams, much of the business activity in which we engage today is controlled largely by forces that are political rather than economic. Under such conditions it is highly important for a businessman to be aware of an overnight change in the price structure due to a sudden change in political policy.

According to Mr. Hughes every dollar of government-owned surplus farm commodities disposed of in the three years ending July 1 was more than matched by a dollar and a half worth of new surplus holdings acquired.

Other speakers included Franklin J. Lunding, chairman of the board, Jewel Tea Co.; Robert C. Liebenow, president, Chicago Board of Trade, and Clarence W. Elmer, veteran trader.

DEALERS!

robber rat dies when you warfarin-ize

WISCONSIN ALUMNI RESEARCH FOUNDATION

LOOK FOR warfarin ON THE LABEL . . . WORLD'S GREATEST RAT AND MOUSE KILLER

50 MILLION ads like this in the nation's leading farm magazines help you sell baits containing warfarin

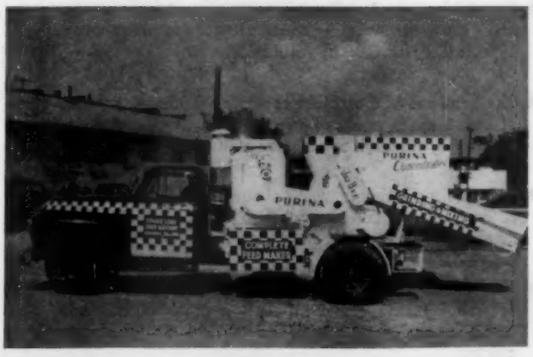
Be sure the bait you stock has warfarin on the label!

"Why Portable Mills Make Money"

A complete modern mill on wheels. Grinds farmers grain. Mixes with concentrates and molasses right on farm. Here are four major reasons why JAY BEE ALL-IN-ONES make money.

1. Farmers want the convenience of on-the-farm grinding service as it saves time and labor.
2. No business ups and downs. Mill works every day whether farmers are busy at home or not.
3. Eliminates competition of farmers home grinding. Saves scarce labor.
4. A milling advertisement for your feed business gets the salesman right out on the farm with customer service. He develops sales of other bag feeds. Increases concentrate sales.

JAY BEE "ALL-IN-ONE" FEEDMAKER BEATS THEM ALL



New Model Jay Bee Portable Feedmaker

"The Complete Feed Mill on Wheels"

WHAT THIS OWNER SAYS:

C. C. Morrow, Tennessee State Hatchery, Columbia, Tenn., Purina dealer who owns the unit shown above, says: "We like our machine very much. It really does a job in a hurry. We also appreciate the prompt and courteous service you give."

ALSO NEW—JAY BEE CORNSHELLER

Specially Designed for Mobile Use

Just think of it! Not just a mobile grinder but a complete modern feed plant on wheels. That's the JAY BEE ALL-IN-ONE. Designed to give maximum service right on the farm. Note these features:

- High capacity for fast production—8 to 10 tons per hour.
- Hydraulic auger for quick bulk unloading.
- Air system for removing dirt and chaff from feeds.
- Deliver bulk or sacked.
- Special mixer design for positive unloading.
- Handles roughage with 20" width industrial type hammermill.
- Unique molasses handling system.

CLIP AND MAIL FOR FULL INFORMATION

J. B. SEDBERRY, INC., FRANKLIN, TENN.

Please send me full information on JAY BEE All-in-One Feedmaker.

NAME .....

COMPANY .....

STREET .....

CITY ..... STATE .....

BOWMAN PRODUCTS

VIANOL
Oil soluble vitamin protector and pigmentation aid.

BoA-S and Bo-A
Stable dry vitamin A products.

BoDEE
Vitamin D-2 or D-3 in dry, oil or water dispersible forms.

BoDEE (Mineral) STABLE VITAMINS D
Vitamin D that will not decompose when combined with minerals.

XANTHOPHYLL CONCENTRATES
For better poultry pigmentation.

HYDROPOID
Dry, free-flowing partially hydrogenated animal fat.

CLOROFOLEN
Effective dog food deodorant.

Bowman Feed Products, Inc.
130 Central Ave., HOLLAND, MICH.

Nutrition Reports Planned for Research Council Meeting

WASHINGTON — Program plans have been announced for the annual meeting of the Animal Nutrition Research Council, to be held Oct. 17 at the Shoreham Hotel in Washington, D.C.

The meeting is being held in connection with the annual meeting of the Association of American Feed Control Officials.

The research council's program was announced in a recent bulletin from the secretary-treasurer, Maxwell L. Cooley, Hoffman-Taff, Inc., Springfield, Mo.

The one-day program will include several talks on various aspects of animal and poultry nutrition research. The speaker at the noon luncheon will be Dr. Byron T. Shaw of the Agricultural Research Service, U.S. Department of Agriculture, who will talk on increasing feed efficiency.

On the morning program, Richard I. Stevens, New York Conservation Department, will report on nutrition studies with rainbow trout. Dr. Damon Catron of Iowa State College will discuss recent developments in baby pig nutrition. A report by Dr. H. M. Scott, B. Connor Johnson and D. E. Becker of the University of Illinois will cover amino acid studies at Illinois in poultry, rats and swine. The effect of calorie sources in a chick diet on growth, feed utilization and body composition will be described by Dr. J. T. Baldini of the Stine Laboratory, E. I. du Pont de Nemours & Co.

In the afternoon, Dr. F. W. Quackenbush of Purdue University will report on chick growth tests on commercial feeds in Indiana. The relationship of protein, energy and unidentified growth factors for chicks will be discussed by Dr. J. H. Hare of Chas. Pfizer & Co., Inc. Dr. R. S. Gordon, Monsanto Chemical Co., will report demonstration of a general deficiency of glycine in complex poultry rations containing soybean oil meal. Factors in the evaluation of coccidiostats will be the topic of a talk by Ashton C. Cuckler of Merck & Co.

The council will hold its annual business meeting during the morning session.

H. E. Webster, Retail Chain Executive, Dies

CONCORD, N.H. — Herbert E. Webster, 80, executive vice president of Merrimack Farmers Exchange, Inc., which has 23 retail feed stores in this state, died Sept. 3 at his home in Salisbury, N.H., following a heart attack.

He also was president of the Farm Bureau Mutual Insurance Co. and a former member of the Franklin (N.H.) Hospital board of directors.

Peavey Co. Makes Key Personnel Moves

Paul H. Christensen

MINNEAPOLIS — In its annual board of directors meeting, F. H. Peavey & Co. made some changes in key personnel. Paul H. Christensen was named vice president in charge of engineering. He was vice president in charge of terminal properties. L. E. Anquist was elected assistant secretary and assistant controller, in addition to his duties as assistant treasurer. J. K. de Werff was elected assistant general counsel.

In a separate action, all officers and directors of F. H. Peavey & Co. were reelected including F. T. Heffelfinger, chairman of the board, and F Peavey Heffelfinger, president.

Production School Committee to Meet

KANSAS CITY—Members of the program committee of the Midwest Feed Production School and all principal speakers on this year's program will meet Oct. 8-9 at the Muehlebach Hotel in Kansas City.

The meeting is being held to "preview" the feed manufacturing cost study being made by the Midwest Research Institute, Kansas City. Results of the study will be presented as part of the school curriculum this year.

The school, sponsored by the Midwest Feed Manufacturers Assn., will be held Dec. 3-5 at the Muehlebach in Kansas City.

Lime Crest Laboratory Experiments

PROVE CDP BETTER PHOSPHORUS SUPPLEMENT FOR GROWING CHICKENS

Purpose of Experiments

(1) To compare the efficiency of utilization of phosphorus in
(a) 17% CDP (Coronet Defluorinated Phosphorus) and
(b) ARG DCP (analytical reagent grade dicalcium phosphate)
by growing chickens.

(2) To compare the quantities of fluorine in the bones of chicks that have received 17% CDP with those that have received ARG DCP

(3) To compare the quantities of both calcium and phosphorus in the bones of chicks that have received 17% CDP with those of chicks that have received ARG DCP.

Summary of Results . . .

- The phosphorus in CDP (Coronet Defluorinated Phosphate) is 105.93 ± 4.26% as available as that in ARG DCP (analytical reagent grade dicalcium phosphate, the theoretically perfect phosphatic mineral supplement produced for laboratory purposes, assumed to be 100% available).
- The chicks grew equally well to the age of three weeks and nine weeks, whether the source of the phosphorus in their diet was CDP or ARG DCP.
- The bone ash of the chicks receiving CDP was greater at both 3 and 9 weeks of age. At 9 weeks, the average difference, although small, *was* statistically significant.
- At both three and nine weeks of age, the ash of the tibias of the chicks contained much less fluorine than is commonly found in the bones of chicks.
- Neither at three weeks nor at nine weeks did the source of phosphorus have a significant effect on the calcium and phosphorus contents of the ash of the tibias of the chicks.

GUARANTEED UNIFORM ANALYSIS

Phosphorus	Calcium	Fluorine
17.0% min.	34.0% min.	0.17% max.

Further Information on These Experiments Sent Free Upon Request. Complete Report Available.

Let us figure the cost of CDP Delivered to Your Plant

CDP Coronet Phosphate Company
NORFOLK 1, VIRGINIA
A DIVISION OF SMITH-DOUGLASS COMPANY, INCORPORATED

KAFIR & MILO
Largest Dealers in Southwest
MID-CONTINENT GRAIN CO.
Kansas City, Mo.

Swift
FOR... Feeds Proteins Minerals
SWIFT & COMPANY
FEED DEPARTMENT
CHICAGO 9, ILL.

For Better Pellets...

THE SWITCH IS TO PACO

Here's the success story of the feed business . . . what dealers and customers* are saying after they've switched to pellets made from Paco!

"They form better . . . with the glossy and slick look I want."

"Moisture doesn't affect my Paco pellets."

"Fines are down 38%!"

"Customers tell me Paco pellets taste better."

"And smell? Man, they smell good!"

"Production is up a healthy 6%."

"Nobody told me it was the only binder on the market that was nutritious, too . . . but it sure is."

These are the facts! Unsolicited testimonials are proving that Paco means better pellets for your customers . . . regardless of other ingredients in the formula! Stock and sell Paco for bigger profits from pellets!

**names sent on request*

PUBLICKER INDUSTRIES INC.
Animal Feed Sales Dept., 1429 Walnut St., Philadelphia 2, Pa.
Yes, I want to know, too, how they are making such good pellets with Paco!

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

CLIP THIS COUPON TO YOUR LETTERHEAD

PACO MOLASSES DISTILLERS DRIED SOLUBLES

A PRODUCT OF
PUBLICKER INDUSTRIES INC.
1429 WALNUT STREET, PHILADELPHIA 2, PA.
PHONE: LOCUST 4-1400

Honegger Entry Wins Laying Test; Champion Crowned at "Hen Party"

CHICAGO—The champion pen of laying hens in the 1956 National Standard Egg Laying Test was the entry of Honegger Farms Co. of Forrest, Ill. The pen of Honegger Layers at the Florida Standard Egg Laying Tests, Chipley, Fla., scored the highest egg production of all entries competing in all the 1956 standard tests in the U.S., according to the Council of American Official Poultry Tests.

Competing with 489 entries of purebred, hybrid and crossbred layers entered by 141 poultry breeders, the champion Honegger entry averaged more than 87% production during the 350-day test. These layers were off the nest an average of less than one day weekly during their entire year of production. The pen's high rate of lay, coupled with large egg size, has given them a total of over 4,250 points to achieve the highest score in total egg output on a weight basis.

"Happy Hen Party"

The champion 13-bird pen, along with the individual champion layer, were flown to Chicago in a Honegger plane and exhibited at a "happy hen party" at the Palmer House in Chicago Sept. 17. In attendance were over 100 agricultural leaders and representatives of the farm and trade press, radio and television farm program directors.

Hosts at the party were Sam Honegger, president, Honeggers' & Co., his brother, Frank, first vice president, and their wives; E. F. Dickey, executive vice president, treasurer and general manager, feed and farm buildings division, and Mrs. Dickey; Dr. George F. Godfrey, vice president and executive director, breeder hatchery division, and Mrs. Godfrey; Erwin C. Wascher, vice president and assistant general manager, and Mrs. Wascher; Bernard P. Kline, vice president in charge of production; L. S. Rolf, vice president in charge of sales, and Mrs. Rolf; Gerald Hill; Walter Lloyd; Mr. and Mrs. Charles Holforty; Jack Chambers; Delmar Norgaard; Ray Huston; and Harold Dickey.

The 13-hen pen produced an average of 305 eggs per bird, for an overall production of 87% during the 350-day Florida test. This was the high record of the 490 13-hen pens competing in all U.S. standard tests during the 1955-56 testing period.

The champion hen, with a 350-day record of 335 eggs, was crowned 1956 queen of the layers, with Evelyn Knight, movie star and current attraction at the Palmer House, bestowing the jeweled crown.

As a part of the exhibit, 20 baskets containing 3,965 eggs portrayed the output of the 13 hens during the test period. Statistics showed the total weight of the hens to be 62 lb., while the weight of their egg output was 542 lb.

Laying Tests

The Florida test, conducted under the supervision of A. W. O'Steen, is one of a number conducted by the agricultural college experiment stations as poultry breeding "show windows" for the nation's egg producers. Detailed performance records are kept by the college supervisors, and monthly reports as to standings are issued to the agricultural press and are followed by hatcherymen and poultrymen.

One of the most prominent of these tests is known as the National Standard Egg Laying Test. Results of the standard tests in various states are tabulated and published by the Council of American Poultry Tests.

Such factors as livability, number of eggs produced, feed consumed, and egg size and quality are recorded and published monthly. Because of the keen interest with which contest results are followed by both hatcherymen and poultry raisers, the tests have created zealous competition in poultry breeding, with breeders using scientific pedigree methods to improve their strains of layers each year.

Four hundred ninety pens (13 birds per pen) or 6,370 hybrid, crossbred, strain-cross, and purebred layers competed from 144 breeding farms in the eight Standard Official U.S. Laying Tests.

The laying tests are located at Chipley, Fla.; Storrs, Conn.; Moun-

Loren V. Burns

TEXAS SPEAKER—Included among the speakers who will appear at the Texas Nutrition Conference scheduled for Oct. 4-5 on the campus of Texas A&M College, College Station, is Loren V. Burns, Kansas City. Mr. Burns is technical director of Agri-Tech, Inc., and director of research for Cerophyl Laboratories. His topic will be "Trends in Feed Manufacturing."

This is what we are telling your dairymen about

HEAVY VITAMIN D feeding for MILK FEVER PREVENTION

PREVENT MILK FEVER with Fleischmann's IRRADIATED DRY YEAST

This season *feed to avoid costly Milk Fever losses.* Feed heavy doses of FIDY Irradiated Dry Yeast—a rich source of vitamin D_2, 5 to 7 days before freshening as an effective Milk Fever preventive.

This inexpensive preventive for costly Milk Fever has been made possible after 15 years of research at the Ohio Agricultural Experiment Station. For the price of 100-200 pounds of milk a cow can be fed to avoid losses due to Milk Fever.

Basically, the Ohio research shows that feeding high levels of Vitamin D_2 for a few days before calving prevents Milk Fever by maintaining blood calcium above the low levels which occur during Milk Fever. This is probably accomplished by increasing the absorption of calcium from the intestinal tract.

How to prevent Milk Fever

1. Feed 30,000,000 units of Vitamin D_2 daily, preferably in two equal feedings, for 5 to 7 days before calving.
2. Discontinue feeding at the end of 7 days.
3. If calving occurs before 6 days, feeding may be continued for one more day.

Fleischmann's FIDY Irradiated Dry Yeast, Type 142—F supplies 30,000,000 units of Vitamin D_2 in 7½ ounces.

When to start feeding FIDY

A cow is protected from about the 4th to the 9th day after FIDY feeding is started. Start feeding FIDY so calving will occur during this 5 day period. This provides leeway in estimating the calving date.

Which cows to feed

Drs. Hibbs and Pounden of the Ohio Agricultural Experiment Station recommend *"—this method of prevention would be applied most advantageously to cows which have previously had Milk Fever attacks, or mature cows in herds where the incidence is especially high."*

Safety of this method

Extensive studies made by the Ohio Agricultural Experiment Station show that the feeding of 30,000,000 units of Vitamin D_2 per day for not more than 7 days offers a simple, safe and effective method for Milk Fever prevention. *Remember, however, that the feeding of heavy doses of FIDY is a Milk Fever preventive. For diagnosis and treatment of Milk Fever, call your veterinarian.*

How to get FIDY for Milk Fever prevention

Special Milk Fever Preventive mixes are now available from many feed dealers containing FIDY Type 142-F a source of Vitamin D_2 used in the Ohio tests. Or, FIDY Type 142-F can be added as an ingredient in your custom or home mixed feeds. Veterinarians are also equipped to supply your needs for this effective Milk Fever preventive. If your own feed dealer or veterinarian is not as yet prepared to take care of your needs, please write us direct.

STANDARD BRANDS, INCORPORATED, Agricultural Department
625 Madison Avenue, New York 22, New York

FREE LEAFLET
"FEED TO PREVENT MILK FEVER"
Tells how FIDY Irradiated Dry Yeast can help you avoid Milk Fever and resultant lowered milk production and possible loss of valuable dairy cows. This valuable information leaflet is free! Send for your copy now. There is no obligation.

Fleischmann's F·I·D·Y IRRADIATED DRY YEAST RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

Now, after 15 years of research at the Ohio Agricultural Experiment Station, Standard Brands can tell this story! The advertisement shown here will appear in the leading dairy journals to acquaint your customers with how to feed for milk fever prevention.

Experiments at the Ohio Agricultural Experiment Station have led to an economical way of feeding heavy doses of FIDY for prevention of milk fever.

This is good news for dairymen—and good news for you—for it means that dairymen can protect their valuable cows at freshening time. You can now offer special formula mixes or FIDY itself to be fed as an aid in the prevention of milk fever.

Free Portfolio Tells All

Send now for portfolio giving complete information. Simple instructions for mixing, labeling and feeding are included. It's all there—clear, concise, easy to read. Request your portfolio today on your letterhead. Be ready to serve the dairymen in your community. Address Desk FS-968. STANDARD BRANDS INCORPORATED, Agricultural Department, 625 Madison Avenue, New York 22, N.Y.

Fleischmann's F·I·D·Y IRRADIATED DRY YEAST RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

FIDY

Distributors for Iowa, Nebraska, Colorado, Kansas and Missouri

Carroll Swanson Sales Co.
620 D. M. Bldg., Des Moines, Ia., Tel. CH 4-5177

ALUMINUM WATERER

Cattle and Hogs. Elec. heat. 1 gal. cap. Salesmen wanted. Only $29.99 lots of 3.

RHINEHART CO.
Ft. Wayne, Ind.

tain Grove, Mo.; Flemington, N.J.; Farmingdale, Long Island, N.Y.; Stillwater, Okla.; Harrisburg, Pa.; and Kingston, R.I. They are all under the supervision of college and experiment station personnel.

From Breeding Farms

While some of the pens in the egg-laying tests are entered by hatchery operators, the majority of the winning entries each year come from specialized breeding farms that develop breeding stock for other hatcheries.

The layers which won the 1956 contest were developed by Honegger Farms Co. at Forrest, Ill. This poultry organization operates one of the nation's largest quality hatcheries, and produces breeding stock for over 100 other hatcheries which offer this strain-cross of layer from coast to coast.

Test officials feel that competition between breeders participating in the various state tests results in better stock for the hatcheries which the breeders serve, and this in turn means better chicks and increased egg profits for the American farmer.

Official statistics from the U.S. Department of Agriculture bear out this improvement, for last year the average American hen produced 192 eggs during the year, compared with 181 eggs per hen in 1953. The 1955 figure shows a 44-egg increase in production per hen in the past 10 years, for in 1945 the average hen produced only 148 eggs.

IMC Net Sales Reach New Record

CHICAGO—International Minerals & Chemical Corp.'s net earnings after taxes for the fourth quarter of its fiscal year ended June 30, 1956, were $2,371,483, equivalent to 97¢ a share on the common stock outstanding at June 30, 1956. These earnings were 23% higher than the net earnings for the fourth quarter of the previous fiscal year of $1,934,591, or 79¢ a share on the shares of common stock then outstanding.

Net sales of the corporation for the fourth quarter ended June 30, 1956, amounted to $30,422,955, an increase of 12% over $27,096,753 for the fourth quarter of the previous year.

Net sales of the corporation for the fiscal year ended June 30, 1956, were $96,626,799, a slight increase over the previous all-time high of $96,485,017 for the preceding fiscal year.

Net earnings after taxes for the fiscal year ended June 30, 1956, totaled $5,401,723, equal to $2.14 per share of common stock, compared with $6,321,903 for the previous fiscal year, or $2.55 per share of common stock then outstanding.

In the corporation's annual report for the fiscal year ended June 30, 1956, which was released Sept. 18, Louis Ware, president, stated that the year was an abnormal one for the corporation, primarily because of the industry-wide strike in the Florida phosphate fields which began June 1, 1955, and continued through the entire first quarter ended September 30, 1955.

He added that other factors which affected the corporation's operations were uncertainties regarding agricultural legislation, lower farm income and a late spring in important farm areas.

Commenting upon the current fiscal year, Mr. Ware said that with settled labor conditions and most of the burden of new plant start-up expense finished, there is a favorable opportunity in the coming year for resumption of the upward trend of sales and profits.

Sales and profits of the potash division in 1955-56 were higher than those of a year earlier, and all division plants operated at capacity, according to the annual report.

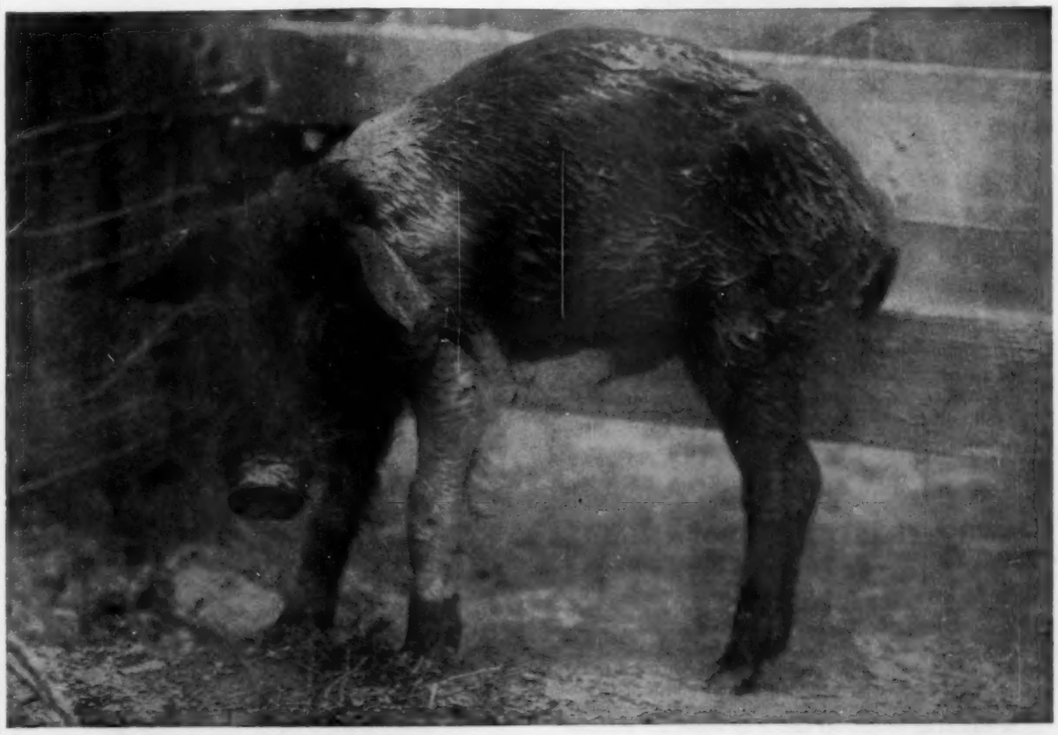
Rainfall in Cycles? Not So, Say Scientists

ABILENE, TEXAS — As Texas farmers look hopefully for the return of wet years, scientists refute the belief that rainfall comes in cycles. A study of weather records at 31 West Texas stations shows that there is no definite pattern to the wet and dry years.

Even the average rainfall is an elusive thing, according to a Texas A&M College report. In West Texas farmers can expect from 52 to 69% of the year to be drier than the average. This is caused by the fact that when a wet year comes along it rains enough to offset two or three dry ones.

Prolonged drouths have occurred ever since records were started. Some of these go back as far as 1889. A severe drouth occurred before the present century began, then others came along in 1917, and in the 1930's, while the present one started in 1951. It is by far the driest of them all, and shows no signs of changing.

Pittsburgh Plate Glass Co.
36% LINSEED MEAL
MEAL SALES — 424 Flour Exchange Bldg., Minneapolis 15
Telephone LIncoln 8469
PLANT AT RED WING, MINNESOTA



NUTRITIONAL DEFICIENCY IS MURDER

Safeguard Your Feeds with CCC Trace Mineral Premixes

CALCIUM CARBONATE COMPANY TRIPLE CCC QUALITY PRODUCTS

Calcium Carbonate Co.
222 W. Adams, Chicago 6, Ill.
Box 409, Carthage, Mo.
325 W.O.W. Bldg., Omaha, Neb.

Can Your Hog Feeds Control Scours?

YOUR FEEDS *can* control bloody scours in swine—recent research proves it! When you combine an antibiotic with just 90 grams of PRO-GEN per ton (the maximum recommended level), your feeds will provide the safest, surest protection against scouring—plus faster, more uniform growth.

No other additive adds so much to your feeds at such low cost: PRO-GEN costs as little as 45c for each ton of feed—can even cut your ingredient costs.

PRO-GEN can cut feed ingredient costs by sparing the requirement for antibiotics. You get better performance from a lower level of antibiotic—plus PRO-GEN—at lower cost.

Whether you use it alone or in combination with other growth stimulants, PRO-GEN promotes faster growth and better feed efficiency during the entire growing period. Makes for greater uniformity, fewer runts. Counteracts selenium toxicity.

Quick, accurate assay

You'll find the control of Arsanilic Acid in your feeds both reliable and convenient with our colorimetric assay (see J. A. O. A. C. 37 106, 1954).

PRO-GEN
ARSANILIC ACID ADDITIVE
Assured Abbott Safety

See for yourself what practical farm and experiment station tests have proven—PRO-GEN is a safe, low cost, effective growth stimulant that pays for itself many times over. Test PRO-GEN in your own feeds on scouring or unthrifty pigs. We'll be glad to furnish trial amounts at no charge.

ABBOTT LABORATORIES • Chemical Sales Division • North Chicago, Illinois

AFMA Purchasing Agents' Unit Reformed

CHICAGO — Oscar Straube, board chairman of the American Feed Manufacturers Assn., has named seven new members to the executive committee of the association's purchasing agents' group. This unit is active in the campaign to change the measure of grain trading to the hundredweight.

The newly-constituted 15-man committee includes: Erle Ellis, Hales & Hunter Co., Chicago, chairman; A. E. Hayes, Moorman Manufacturing Co., Quincy, Ill., vice chairman; R. H. Griffiths, Allied Mills, Inc., Chicago, secretary; Fred Becker, Farm Bureau Milling Co., Hammond, Ind.; S. J. Beyhan, Cooperative Mills, Inc., Baltimore; John Brooks, H. K. Webster Co., Lawrence, Mass.; Joe Cooper, Staley Milling Co., Kansas City; R. H. Dean, Ralston Purina Co., St. Louis; G. H. Forney, Albers Milling Co., Los Angeles; Charles W. Harris, Burrus Feed Mills, Ft. Worth; Elmer Korte, McMillen Feed Mills, Ft. Wayne, Ind.; Frank Rice, the Early & Daniel Co., Cincinnati; Charles B. Saul, Lindsey-Robinson Co., Roanoke, Va.; Kenneth Tilden, Quaker Oats Co., Chicago, and Robert W. Wiper, General Mills, Inc., Minneapolis.

Smith-Douglass Names Advertising Manager

NORFOLK, VA.—J. H. Culpepper, vice president of the Smith-Douglass Co., has announced the appointment of J. R. Stiffler as Smith-Douglass advertising manager. A native Iowan and graduate of St. Ambrose College, Mr. Stiffler joined Smith-Douglass in 1953 as advertising assistant.

He will be responsible to Smith-Douglass for coordination of advertising and sales promotion of the corporation's divisions, which, in addition to fertilizer, include the Coronet Phosphate Co., Smith-Rowland Co., San Jacinto Chemical Co., and Nutro lawn and garden plant foods. He is president of the Norfolk Advertising Club.

Turkey Disease Fellowship Awarded

MT. MORRIS, ILL.—Dr. O. H. Osborn, University of Minnesota, St. Paul, has been awarded the Dr. Salsbury research fellowship of $1,500 for another year, according to an announcement by M. C. Small, executive secretary of the National Turkey Federation, Mt. Morris.

The fellowship fund, for research related to turkey diseases, is provided by Dr. Salsbury's Laboratories, Charles City, Iowa, and administered by the National Turkey Federation.

The first fellowship was awarded to Dr. Robert D. Conrad, State College of Washington, in 1954. The second and now the third fellowships have been awarded to Dr. Osborn.

Dr. Osborn's work at the University of Minnesota has been in connection with a research program under the direction of Dr. B. S. Pomeroy. It deals with modes of spread of infectious sinusitis of turkeys with particular reference to egg transmission. As the result of this research, it was determined the causative agent of infectious sinusitis is egg transferred.

The second phase of the over-all experiment has been to determine what effect antibiotics have on egg transmission of the sinusitis agent. The research with antibiotics to date has given many promising leads, Mr. Small said. However, further research is necessary before any positive conclusions can be made, and Dr. Osborn's work for another year will be toward this end.

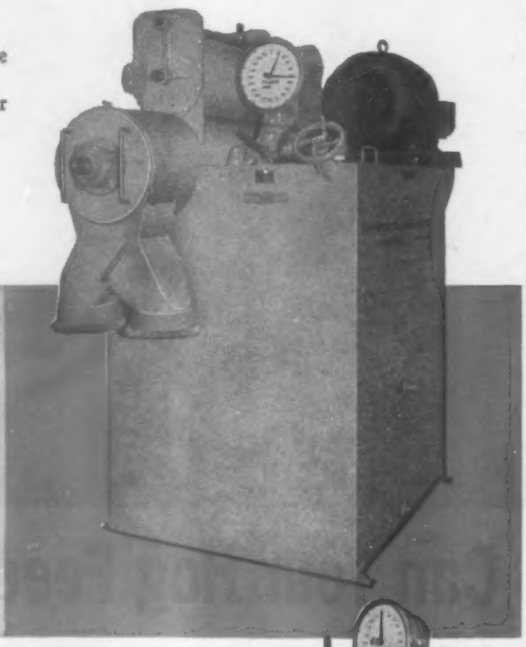
$130,000 FIRE

INDEPENDENCE, IOWA—A fire that burned eight days caused an estimated $130,000 damage to the Wapsie Valley Feed Mill here recently. The fire broke out at the mill's mixing plant and the heat from the blaze ignited grain and feed in two concrete bins adjacent to the mill. Eight days later a series of three explosions from the smouldering grain rocked the large tanks. Lee Ogdahl, manager, said that it will be three or four months before the mill will be back in operation. Meanwhile, three mills, Quaker Oats at Cedar Rapids, Big Gain at West Union and Rooster Mills at Dubuque, are mixing feed for the Wapsie Valley concern, maintaining normal service.

TRADE MARK REG.
VITA-GEE
A LIVE YEAST CULTURE — for 4-footed animals and poultry. Supplies all known B Complex Vitamins including B_{12} plus other nutritional factors. Easy to add to any formula.
Write or Wire for sample and prices.
ZELLERS' LABORATORIES READING, PA.

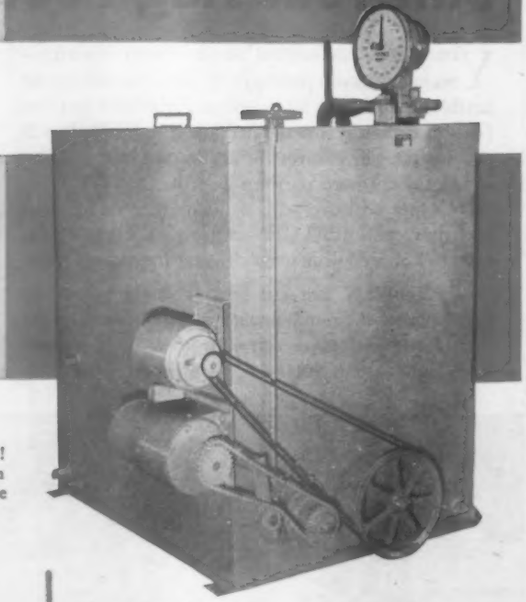
Wenger Has the Answers to ANIMAL FAT FEED MIXING

You can forget about all the "problems" connected with mixing animal fats into your feed. Balling, clogging, induced instability, mechanical difficulties are a thing of the past with Wenger Animal Fat Mixing equipment. Now you can mix these ever-more-popular fats smoothly, evenly into poultry feeds, dairy feeds or pellet mashes with Wenger packaged Unit Fat Mixers or Multi-Blenders, both of which are produced in 3 models, with capacities from 7 to 50 tons per hour.



WENGER SERIES 750 ANIMAL FAT MIXER

Here's one of Wenger's Packaged Unit Fat Mixers — the most satisfactory way to mix animal fats into premixed mash feeds. These fine units are high speed mixers equipped with built-in 400-gallon fat tanks, automatic temperature conditioning, agitation, metered flow fat pump etc. to apply the fat to the feed at just the right temperature and in just the right proportion. Unit illustrated has capacity to 20 tons an hour. Other sizes of fat mixers also available — 900 Series with capacity to 8 tons and 1275 Series Animal Fat Feed Mixer with capacities to 50 tons per hour. 3 models of Multi-Blenders also available to handle simultaneous application of several liquids — animal fats, molasses, fish solubles, etc.



WENGER SERIES 100 ANIMAL FAT FEEDER makes it easy and profitable to blend fats into your formula feeds through your present high speed mixing equipment or Wenger Hi-Molasses Mill; or inject the liquid fat directly into the tempering chamber of a hard pellet mill. All contact with copper, brass or bronze is eliminated in this proportioning feeder.

Get all the Facts —

Write for this FREE TECHNICAL BULLETIN! Here are all the facts and data you need to plan a fat mixing installation . . . Explains Bulk Storage Installations and the several available means of applying fats to your feeds.

Wenger Mixer Mfg. Co.
SABETHA, KANSAS Phone 111

Standard of the Industry for Molasses Feed Mixing, Pelleting and Cooling Equipment.

For Finer Packaging
Look to Fulton BAG & COTTON MILLS First

FEEDAROMA
Smells good!
Tastes good!
Sells good!
LOW IN COST
write
FLAVOR CORPORATION OF AMERICA
3037 N. CLARK ST., CHICAGO 14, ILL.

these smart dealers tell you why...

IT PAYS TO BE A DANNEN DEALER!

"RESALE"

VERNE WITMER, Berwick, Kansas

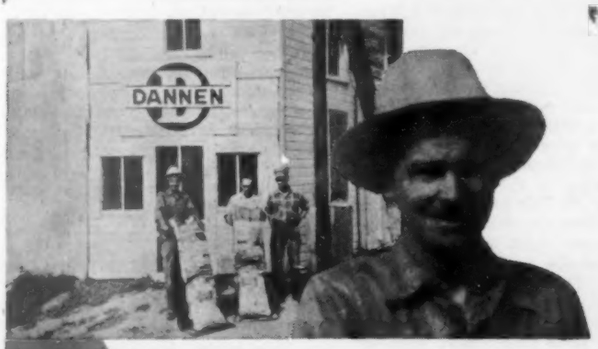
"Believe me, I'm really sold on the way the Dannen folks do things! Every time the Dannen territory man and I get together and go call on my customers, I notice a steady increase in my business. My customers have commented over and over again how much they appreciate hearing about Dannen Feeds first hand."

"FEEDER MEETINGS"

BRUCE JOHNSTON, Inavale, Nebraska

"Anyone in business realizes how important it is to have the full support of his supplier. Dannen Mills is more than doing its share to help me sell. One of the first things that comes to mind is the Dannen Feeder Meetings. Everybody always has a good time at those meetings and I can't begin to tell you what the results have meant to me in the way of customers!"

"FARM TOURS"



GLEN SPARKS, Princeton, Missouri

"You know, Dannen Mills not only helps me get new customers, but also helps me keep the ones I already have! Why, when I take some of the folks on one of those trips to the Dannen Research Farm, they come back more impressed than ever. It's good 'selling sense' and plenty good for my business!"

DANNEN

HERE'S HOW DANNEN HELPS YOU SELL:

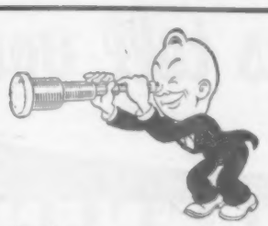
- Concentrated Farm Resale
- Feeder Meetings
- Sales Training School for Dannen Dealers and their Employees
- Extensive Newspaper and Farm Paper Advertising
- Strong Radio and TV Coverage
- Local Newspaper Advertising
- Live Displays
- 247-Acre Research Farm
- Dealer Meetings
- Premium Promotions
- Product Control Department
- Feeder Finance Programs
- Effective Point-of-Sale Material
- Outdoor Signs
- Special Promotion for New Dealers

DEALERSHIPS AVAILABLE *Write today for complete information.*

DANNEN MILLS, INC.

ST. JOSEPH, MISSOURI

UP OR DOWN?



By Leonard W. Schruben
Agricultural Economist, Kansas State College

Price Outlook for Grain Sorghum

The grain sorghum situation this year will be dominated by: a smaller grain sorghum crop and a larger corn crop than last year; increased quantity of corn placed under price support; the price support level; and emergency feed programs to cope with effects of the drouth.

The large corn and reduced sorghum grain production can be expected to bring the prices of these two grains more into balance with their relative feeding values. In other words, you can look for grain sorghum prices to advance more during the season than corn prices. This advance, however, may not be much more than 20 to 30¢ cwt. from harvest season lows.

This relationship was explained in this column in the Dec. 24 issue of Feedstuffs. The further out of line prices are as compared to relative feeding values, the greater the economic pressure to bring prices more into line. On this basis you can expect grain sorghum prices to advance relative to corn prices as the season progresses.

Recently on the Kansas City market, you could buy practically the same feeding value for 40¢ less per cwt. of milo as compared with corn. Your customers, buying grain to feed dairy cows, could use a savings of this amount.

EXHIBIT 2—Grain Sorghum: Farm price, parity price and farm loan rate, U.S., 1940-56.

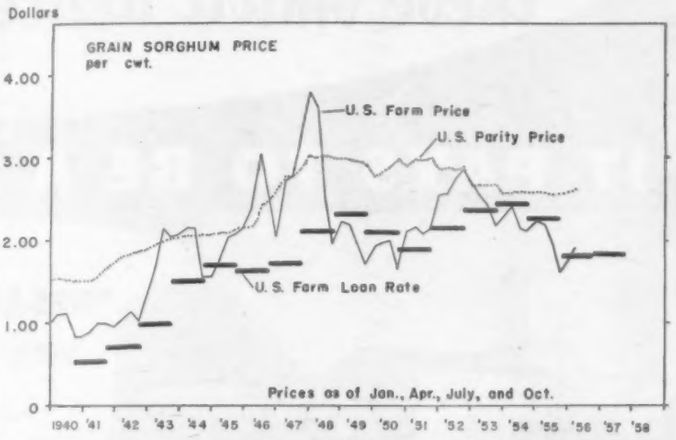


EXHIBIT 1—Grain Sorghum: Average Price Received by Farmers, U.S., Percent of Times Price went Up from Base Month to Subsequent Month, 1933-1953.

Base month	SUBSEQUENT MONTH																					
	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
January	52	67	76	76	81	71	57	57	57	57	52	60											
February		86	81	90	81	71	52	52	52	57	52	60	60										
March			86	81	81	71	52	52	57	52	52	60	60	65									
April				76	76	67	52	52	52	43	48	60	60	65	60								
May					57	57	52	52	48	43	48	60	60	65	60	60							
June						52	52	48	48	33	33	60	50	55	60	65	65						
July							33	43	33	33	33	45	40	45	55	60	55	55					
August								43	24	33	33	50	45	55	60	60	60	60	60				
September									24	24	38	55	45	55	65	65	75	70	65	55			
October										29	57	70	75	80	85	85	85	75	65	60	55		
November											76	85	75	90	90	95	85	75	70	60	55	60	
December												95	85	80	85	85	80	75	70	55	55	55	55

In the past, prices have tended up after harvest. Exhibit 1 shows the percent of times U.S. farm prices for grain sorghums have gone up after a given month. It covers the 20 years prior to 1953. It looks complicated at first glance, but it is easy to use once you learn how.

Here is how to use Exhibit 1. First find the current month on the left side. In this case it is October. Now read over to the month when you may want to sell. In the November column you will find a 29. That means that only a little more than one year out of four have prices gone up from October to November. Under the June column on the same line you will find an 85. This means that prices advanced from October to the following June over eight out of 10 times.

Other months may be read in the same way. For example, on the November line you will find a 95 under May. Almost every year, from 1933 to 1953, U.S. farm prices have gone up from November to May. They also went up in 1954 and 1955.

Price Supports Important

The relationships among farm prices, loan rate and parity are shown in Exhibit 2. The chart goes back to 1940 when price supports were started.

Prices have dropped below the support rate several times since price supports were started. The longest stretch below the loan rate was in the late 1940's. Since then support rates for grain sorghum have been lowered as compared with corn.

Because of the competitive relationships, corn support levels are important in determining grain sorghum prices. If corn is worth $1.25, grain sorghum will be worth from $2.05 to $2.25 cwt. depending somewhat upon the kind of livestock to which it is fed.

The loan rate is expected to be a rather effective floor for prices this year, although some selling may occur under harvest pressure at lower prices. This being the case, odds favor prices advancing from harvest season lows through the spring months. Such advances, however, aren't likely to be very great, at least until after the first of the year.

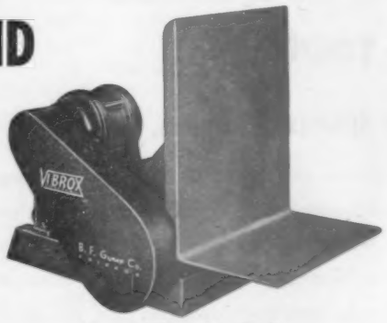
Yeast Products Firm Building Laboratory

WASCO, CAL.—Nearing completion here is the new centralized research laboratory of Pacific Yeast Products, Inc., located on a tract adjacent to the firm's manufacturing plant here.

The structure has 16,000 sq. ft. of floor space and is designed to accommodate a staff of 75 scientists and technicians. Robert A. Fisher, research director, will be in charge of the laboratory work of finding new products derived through fermentation for the animal nutrition, medical, food and agricultural fields.

STURDY AND PRACTICAL

pack cotton or burlap bags



No. 36 Vibrox Bag Packer, with flat back.

Savings in bag expense and packing labor have repaid the cost of Vibrox Packers in hundreds of feed plants. These simply designed, rugged units pack the same amount of feed into a shorter bag, to make a worthwhile reduction in bag costs. Labor costs are cut, too, because with a Vibrox Packer, two men can usually do the work that previously required three. Users have often reported that the combined savings paid for the Vibrox within 60 to 90 days.

In addition—packing on a Vibrox makes a firmer, better appearing bag, that is easier to handle and warehouse.

The No. 36 Vibrox Bag Packer packs 50 to 150 pounds of mash, dairy and molasses feeds and similar products into cotton or burlap bags. It operates continuously, packing the bag as it is filled from overhead scale. Filled and packed bags are removed, and empty ones placed on the packing platform without stopping the Vibrox. Construction is heavy-duty, for years of trouble-free hard service.

Besides the flat back model shown above—designed for installation with conveyor belt—the No. 36 Vibrox is available in a round back model and in a portable unit, to meet various packing line requirements.

For a practical and economical answer to your feed packing problems—investigate the Vibrox Bag Packer. Write for a copy of Bulletin 402... and ask our engineers for installation suggestions and recommendations on your specific requirements. No obligation, of course.

Flat Back Vibrox Bag Packer installed under conveyor belt, with automatic scale and bag closing machine. With such an installation, one man can easily weigh, pack and close four to six 100-pound bags per minute.

FEEDING • MIXING • SIFTING • GRINDING • WEIGHING • PACKING and PACKAGING EQUIPMENT FOR THE MILLING INDUSTRIES

B. F. GUMP CO.

Engineers and Manufacturers since 1872

1310 S. Cicero Avenue . . . . . Chicago 50, Illinois

PHOSPHOROUS

13% LOW-FLUORINE 14%

LESS THAN ONE HALF OF ONE PERCENT

FEED-A-PHOS

PACKED IN 100-LB. PAPERS OR BULK

WIRE • WRITE • CALL JA 3-5848

COMMERCIAL MINERALS, INC.

3401 S. MAIN SUITE 201 HOUSTON, TEXAS

SPEAKERS — Among those who spoke during a recent three-day sales convention of the Murphy Products Co. were the three men pictured above. From left to right, they are Dr. Robert R. Spitzer, Murphy's executive vice president; Dr. T. J. Cunha, head of the animal husbandry department, University of Florida, and Eugene Spitzer, research and technical director of Murphy's.

Murphy Products Co. Sales Personnel Hold Convention

BURLINGTON, WIS. — Over 200 Murphy Products Co. representatives from a 13-state area gathered in Burlington recently for the concentrate feed firm's annual fall sales convention which marked 35 years in the feed business.

James H. Murphy, president and general manager, opened the three-day convention with remarks in which he pointed out that the company is heading into a new era under a younger executive team.

In reviewing current farm and marketing conditions, Mr. Murphy said, "Conditions are good — better than a year ago in many cases, and what's most important, the farmer thinks so too. Dairy prices are up—beef cattle prices are up as are the prices on feeder steers. Farm land prices are up 8%, and that is caused by nothing other than a demand on the part of farmers."

Dr. Robert Spitzer, recently appointed as executive vice president of Murphy's, outlined a feed service and sales program for the coming year. Dr. Spitzer also focused attention on the brighter agricultural picture.

Much of the program was devoted to information and demonstrations of new sales and service tools.

One of the featured speakers on the program was Dr. Tony J. Cunha, head of the animal husbandry department of the University of Florida.

Dr. Cunha paid tribute to the Murphy Products Co. for a quality feed program as well as a quality feed product.

Dr. Cunha reviewed the work that has been done to date in swine feeding and went on to mention some of the experimental work that is being done now.

"Swine production is becoming more specialized and more intensified. Speeded-up growth and production mean a 'speeded-up' feed as well.

"Better breeding, sanitation and management are sorely needed now, and anything feed men can do to help feeders cut baby pig losses is of vital importance," he said.

Eugene Spitzer, Murphy research and technical director, reviewed progress at the new Murphy Research Farm in testing new feed ingredients.

An address by Dr. Kenneth McFarland, educational consultant to General Motors Corp. was a feature of the meeting. Dr. McFarland developed the point that in order to be successful in any business, you must not only know your business thoroughly but you must be a good man as well.

Mill Equipment to Be Bought for Formosa

WASHINGTON—The International Cooperation Administration announces that feed plant equipment for Formosa is to be purchased by the Chinese government.

The bid deadline is Oct. 15. Detailed specifications may be obtained from the Chinese Government Procurement & Services Mission, Room 1008, 149 Broadway, New York 6, N.Y.

Equipment to be purchased includes a fork-lift truck, a pneumatic conveyor system of three units, a bucket elevator unit, steel-roller chain, crusher, pelleting unit, batch mixer, molasses mixer, automatic bagging scale and sewing head and a panel truck.

NEW PHONE NUMBER

ATLANTA, GA.—The new phone number of Heard-Kinard-Smith, Inc., Atlanta feed brokerage firm, is CHerokee 5378.

LABORATORY QUALITY CONTROL
Hormones, Digestibility, Nicarbazin, Urea
Feeds, ingredients, tallow stability,
alfalfa, gossypol, nitrogen solubility
THE POPE TESTING LABORATORIES
BOX 903 Referee Service DALLAS 21, TEXAS

here's NEW SALES APPEAL for your DAIRY FEEDS

STEP AHEAD OF COMPETITION with DAWE'S PROVEN RUMINANT PROGRAM

Now, you can sell a dairy herd nutrition program based on results . . . results that are demonstrated in better feed conversion, higher herd averages, steadier production and improved vigor and appearance.

Dawe's Ruminant Program is years ahead, but thoroughly field-proved on thousands of animals coast-to-coast. It includes balanced, fortified feed formulas designed for high-efficiency performance in dairy nutrition. It is in keeping with the trends exemplified by research work at leading state experiment stations.

Feed manufacturers employing the Dawe's Ruminant Program are experiencing a new era in dairy feed sales and customer satisfaction. It is a volume-building program, including nutrition, merchandising and sales training assistance, for progressive feed manufacturers who seek leadership in the field of dairy feed sales.

Learn how you can profit through Dawe's Ruminant Program. Mail the coupon today. There is no obligation.

Dawe's Ruminant Program represents years of research and field testing to bring to dairymen advancements in nutrition on a par with those available to raisers of poultry and swine.

ALSO COMPLETE PROGRAMS FOR BEEF CATTLE—POULTRY—SWINE

Dawe's Laboratories, Inc.
4800 S. Richmond St., Dept. FS-96 Chicago 32, Illinois

Offices and warehouse stocks: Belgium—13, Courte rue des Claires, Antwerp. Mexico—Sierra Leona 755, Mexico 10, D. F.

Please send me full information on Dawe's Ruminant Program.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ STATE_____

WORLD'S OLDEST AND LARGEST SPECIALISTS IN VITAMIN PRODUCTS FOR FEEDS

DISTRIBUTED BY THE FOX COMPANY
FOXCO
QUALADEE
A and D VITAMIN OIL
NEWFIELD NEW JERSEY
"PRODUCTS OF PROGRESS"

RILEY Feed Company
BROKERS—
COMPLETE LINE OF FEED INGREDIENTS
939 BOARD OF TRADE KANSAS CITY 6, MO. BALTIMORE 1-2980

CONVENTION CALENDAR

Oct. 1-3—National Renderers Assn.; Hotel Statler, Boston; sec., Miss Jamie C. Fox, 30 N. La Salle St., Chicago 2, Ill.

Oct. 2-4 — Northeastern Poultry Producers Council exposition and convention; Onondaga County War Memorial Auditorium, Syracuse, N.Y.; managing dir., Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-5—Texas Nutrition Conference; Texas A&M, College Station, Texas; chmn., J. R. Couch, Dept. of Poultry Husbandry, Texas Agricultural & Mechanical College, College Station, Texas.

Oct. 8—Virginia State Feed Assn.; Natural Bridge Hotel, Natural Bridge, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 9-10—Virginia State Poultry Federation; Natural Bridge Hotel, Natural Bridge, Va.; sec. J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 12—Nebraska Nutrition Conference; University of Nebraska, Lincoln; chm., Prof. William Loeffel.

Oct. 15-16—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno; sec., John Gilmore, 1400 10th St., Sacramento 14, Cal.

Oct. 17—Iowa Cattle Feeders Day; Iowa State College, Ames; chm., Prof. C. C. Culbertson, animal husbandry department, Iowa State College.

Oct. 17 — Animal Nutrition Research Council, annual meeting, Shoreham Hotel, Washington, D.C.; sec., Maxwell L. Cooley, Hoffman-Taff, Inc., Springfield, Mo.

Oct. 17-18—Assn. of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., L. E. Bopst, U. of Md., College Park, Md.

Oct. 18-19—Michigan Feed & Grain Conference; Kellogg Center, Michigan State University, East Lansing; sec.-treas., John A. Krusoe, Box 472, East Lansing, Mich.

Oct. 25-26 — Oklahoma Formula Feed Conference; Oklahoma A&M College, Stillwater, Okla.; co-chm., Dr. Magnar Ronning and Dr. William Kirkham.

Oct. 26—Illinois Sheep Production Day; Stock Pavilion, University of Illinois, Urbana, Ill.; chm., U.S. Garrigus, Department of Animal Science.

Nov. 2 — Ohio Animal Nutrition Conference; Ohio State University, Columbus, Ohio; chm., W. J. Tyznik, Department of Animal Science.

Nov. 8-9—Cornell Nutrition Conference for Feed Manufacturers; Statler Hotel, Buffalo, N.Y.; chm., Prof. G. F. Heuser, Rice Hall, Cornell University, Ithaca, N.Y.

Nov. 8-9—Florida Nutrition Conference; University of Florida Agricultural Experiment Station, Gainesville; John P. Feaster, University of Florida, Gainesville.

Nov. 12-13—Missouri Feed Conference; Memorial Union Bldg., University of Missouri, Columbia; chm., Dr. W. H. Pfander, Mumford Hall, University of Missouri, Columbia, Mo.

Nov. 14-15—Illinois Feed Assn. and Illinois Poultry Improvement Assn., joint meeting; Armory, Leland Hotel (IFA) and St. Nicholas Hotel (IPIA), Springfield, Ill.; sec., IFA, Dean M. Clark, Board of Trade Bldg., Chicago, Ill.; sec., IPIA, Aubrey Hariess, Box 91, Shelbyville, Ill.

Nov. 16—School for Poultry Servicemen in Feed and Allied Industries; College of Agriculture, Rutgers University, New Brunswick, N.J.; chm., C. S. Platt, Poultry Department.

Nov. 18-19—Tennessee Feed Manufacturers Assn.; Hermitage Hotel, Nashville, Tenn.; sec., Wendell H. Levine, 200 Baxter Bldg., Nashville.

Nov. 19-20—Western Grain & Feed Assn.; Fort Des Moines Hotel, Des Moines, Iowa; exec. sec., Mark G. Thornburg, 928 Des Moines Bldg., Des Moines 9, Iowa.

Nov. 23-24 — American Society of Animal Production; Hotel Sherman, Chicago; sec., W. M. Beeson, Dept of Animal Husbandry, Purdue University, Lafayette, Ind.

Nov. 26-27—American Corn Millers Federation; Drake Hotel, Chicago; sec., Harry Hunter, 173 W. Madison St., Chicago 2, Ill.

Dec. 3-4—Farmers Elevator Assn. of South Dakota; Huron, S.D.; sec., C. C. Anderson, 423 Citizens Bldg., Aberdeen, S.D.

Dec. 3-5—Midwest Feed Production School, Muehlebach Hotel, Kansas City, Mo.; sponsored by Midwest Feed Manufacturers Assn.; Lloyd S. Larson, executive vice president, 20 W. 9th St. Bldg., Kansas City, Mo.

Dec. 6-7—Washington Animal Industry Conference; Western Washington Experiment Station, Puyallup, Wash.

Dec. 6-7—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh, N.C.; chm., George Wise, Animal Nutrition Section, North Carolina State College, Raleigh, N.C.

1957

Jan. 7-8 — Kansas Formula Feed Conference, Kansas State College, Manhattan; chm., F. W. Atkeson, head of department of dairy husbandry, Kansas State College, Manhattan.

Jan. 8-10 — National Turkey Federation, Cincinnati, Ohio; exec. sec.,

Mr. Feed Manufacturer:

You Profit **because . . .**

EVERY DETAIL OF THE ULTRA-LIFE PROGRAM IS LINKED FOR SERVICE TO YOU

The Ultra-Life Program is a complete program designed to help feed manufacturers build *and sell* top quality poultry and livestock feeds. When you manufacture feed under the Ultra-Life Program you profit because every detail is linked for service to you and your customers.

Outstanding vitamin and trace mineral products for fortification of poultry and livestock feeds.

Formula service to help you build nutritionally complete feeds with full emphasis on economic advantages of ingredients.

Biological and laboratory testing of feed ingredients and finished feeds.

Exclusive on-the-farm service programs. . . . Ultra-Way Method of Internal Culling—Ultra-Way Poultry Service—Ultra-Life Livestock Service.

Schools for training your employees in on-the-farm service work and feed salesmanship.

Feed tag registrations and printing of tags for your brand name feeds.

A complete advertising service for YOUR BRAND NAME Feeds . . . direct mail pieces and letters, folders, posters, newspaper mats, booklets, radio continuity, and your own 16-page colorful monthly Poultry and Livestock Journal.

YES, every detail of the Ultra-Life Program is linked for service to you, to help you build *and sell* highest quality, result-getting poultry and livestock feeds—Your Own Brand Name Feeds.

Why not let us explain the Ultra-Life Program in detail to you? You be the judge as to whether we have something you can use to advantage! Just drop us a line on your letter-head. No obligation, of course.

LABORATORIES, INC. Main Office and Plant: East St. Louis, Illinois

One of the Country's Oldest and Largest Manufacturers of Vitamin and Trace-Mineral Products

FRL FOOD RESEARCH LABORATORIES, INC.
Founded 1922
RESEARCH
ANALYSES • CONSULTATION
Biological, Nutritional, Toxicological Studies
for the Food, Drug and Allied Industries
48-16 33rd STREET, LONG ISLAND CITY 1, N. Y.
Bulletin "What's New in Food and Drug Research" available on letterhead request.

CUT Phosphate COSTS

APPROXIMATE COMPARATIVE COST PER UNIT OF EFFECTIVE PHOSPHORUS
(Delivered Midwest)

Soft Phosphate	$2.55
Bone Meal	6.65
Dicalcium Phosphate	4.60
Defluorinated Phosphate	4.50
Low Fluorine Rock Phosphate	4.20

Soft Phosphate

WRITE for sample & price

Soft Phosphate Inc., Box 31, Media, Pa.

NOW WEAN BABY PIGS AT TWO WEEKS

Swift's new BABY PIG PRIMER

With the New Enzyme—PEPSIN!

Now, at two weeks, your pigs can have the same ability to digest lower-cost feeds that you've always expected at five to six weeks. This is the magic of the enzyme pepsin, proved by extensive feeding trials at Iowa State College. You can have it now in Swift's New Baby Pig Primer . . . plus the generous nutrition of the PICK OF THE PROTEINS and CALOGEN, Swift's famous energy ingredient.

You'll save up to 25 percent on the production cost of pigs to eight weeks old. Baby pigs can now digest lower-cost oil meals—higher-cost, milk-based pre-starters are not needed. And you'll save 30 to 40 pounds of sow weight by weaning early. Also, when pigs are eight weeks old, you'll see them 10 pounds heavier than usual . . . up to 40 or 50 pounds.

Swift's NEW BABY PIG PRIMER with pepsin puts your hog program in motion fast during those critical first weeks—the period that can make or break your profit. See your Swift's feed dealer now.

here is a program to produce lower-cost hogs:

1-14 Days—pigs on sow

- 8-14 Days—start Swift's New BABY PIG PRIMER, self-fed in the creep
- 15th Day—wean pigs to Swift's BABY PIG PRIMER alone. Each pig should eat about 5 lbs. of PRIMER.
- Then—start Swift's SWEET PIG MORSELS, self-fed. Also contains new enzyme, pepsin. Feed about 20 lbs. per pig. Follow with Swift's PIG POWER self-fed to 8 weeks of age.
- 9th week—start Swift's PIG CONCENTRATE with grain.
- After pigs reach 100-120 lbs., switch to Swift's SWINE CONCENTRATE with grain.

This Advertisement

is now appearing in leading state farm papers—a new product announcement by Swift reaching the producers of more than 25 million hogs.

Make this Your story and put yourself at the head of the Hog Feed Parade with Swift

When you send out the word that you are headquarters for a new, practical, safe, low-cost pre-starter containing enzymes, there's going to be a fast re-shuffle in the hog feed business. Swift's new BABY PIG PRIMER is a good name and a quality product you can turn into cash—now.

This is your open opportunity to win new customers from every direction. *And you can turn these customers into program feeders.* Swift has the other hog feeds to step up the efficiency and economy of hog raising.

Swift makes it easy to wean hog raisers away from your competition! There is an attractive and low-cost introductory stock deal on Swift's BABY PIG PRIMER. Today is the day to start it working for you.

Write, wire, or phone Swift's Feed Department, Chicago 9, Illinois.

FEED DEPARTMENT • CHICAGO 9, ILLINOIS

Swift
101st YEAR

M. C. Small, P.O. Box 69, Mt. Morris, Ill.

Jan. 11-12—Kansas Seed Dealers Assn.; Hotel Broadview, Wichita, Kansas; sec., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

Jan. 13-15—New Mexico Grain & Feed Dealers Assn.; Hilton Hotel, Albuquerque, N.M.; exec. sec., H. B. Hening, P.O. Box 616, Albuquerque, N.M.

Jan. 20-22—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

Jan. 23-24 — Massachusetts Dairy Farmers Seminar; University of Massachusetts, Amherst, Mass.

Jan. 28-30 — Southeastern Poultry & Egg Assn.; Dinkler-Plaza Hotel, Atlanta; exec. sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Jan. 30-Feb. 2—American Dehydrators Assn., Edgewater Gulf Hotel, Edgewater Park, Miss.; exec. vice pres., Joseph Chrisman, 430 Board of Trade Bldg., Kansas City, Mo.

Jan. 31-Feb. 1—University of New Hampshire Poultry Health Conference; University of New Hampshire, Durham, N.H.; chm., Prof. W. C. Skoglund, Poultry Dept.

Feb. 4-8—Assn. of Southern Agricultural Workers, Birmingham, Ala.

Feb. 7-8—Oregon Animal Industry Conference; Oregon State College, Corvallis; chm., Dr. J. R. Parker.

Feb. 10-12—Wyoming Grain, Feed & Seed Dealers Assn.; Casper; sec., Everett L. Berry, P.O. Box 118, Sheridan, Wyo.

Feb. 14-15 — Washington State Feed Assn.; Olympic Hotel, Seattle; sec., J. G. Wilson, 314 Second Ave. Bldg, Seattle 4, Wash.

Feb. 14-15 — Utah Feed Manufacturers & Dealers Assn.; Brigham Young University, Provo, Utah; sec.-treas., Dr. Lawrence Morris, Animal Husbandry Dept.

Feb. 15-17—Institute of American Poultry Industries Fact Finding Conference; Municipal Auditorium, Kansas City, Mo.; pres., Cliff D. Carpenter, 221 North LaSalle St., Chicago 1, Ill.

Feb. 17-19 — Midwest Feed Manufacturers Assn., Broadmoor Hotel, Colorado Springs, Colo.; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Feb. 19-20 — Virginia Polytechnic Institute Nutrition School for Feed Men; Hotel Roanoke, Roanoke, Va.; chm., Paul M. Reaves, dept. of dairy science, VPI, Blacksburg, Va.

Feb. 24-26—Ohio Grain & Feed Dealers Assn.; Neil House Hotel, Columbus, Ohio; sec., G. E. O'Brien, 212 Martin St., Greenville, Ohio.

Feb. 24-26—Colorado Grain, Milling & Feed Dealers Assn.; Denver, Colo.; sec., R. B. Kelly, 714 Cooper Bldg., Denver 2, Colo.

March 13—Distillers Feed Conference; Sheraton-Gibson Hotel, Cincinnati, Ohio; exec. director, Lawrence E. Carpenter, 1232 Enquirer Bldg., Cincinnati, Ohio.

March 13-17 — Grain Processing Machinery Manufacturers Assn.; Edgewater Gulf Hotel, Edgewater Park, Mississippi; sec., Raymond J. Walter, 511 Fifth Ave., New York 17, N.Y.

March 14-15—Oregon Feed & Seed Dealers Assn., Multnomah Hotel, Portland; mgr., Huss Hayes, Lewis Bldg., Portland 4, Ore.

March 17-18—Quad-State Convention; Martin Hotel, Sioux City, Iowa; sec., Don Suttle, Sioux City Grain, Feed & Seed Assn., Box 341, Sioux City.

March 21-22 — Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm. Dr. G. Lynn Romoser, Department of Poultry Husbandry, University of Maryland, College Park, Md.

April 4-6—Animal Health Institute, annual meeting; Greenbrier, White Sulphur Springs, W. Va.

April 10-11—Texas Feed Manufacturers Assn.; Gunter Hotel, San Antonio, Texas; sec., Ben E. Schmitt, 528 Bewley Bldg., Ft. Worth, Texas.

April 12-13—Texas Grain & Feed Dealers Assn.; Gunter Hotel, San Antonio, Texas; sec., Ben Ferguson, 614 Meacham Bldg., Ft. Worth 2, Texas.

April 25-27—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., O. E. Case, 901 Wiley Bldg., Hutchinson, Kansas.

April 26-May 1—National Fisheries Institute; Edgewater Beach Hotel, Chicago; Mal Xavier, 1614 20th St. N.W., Washington 9, D.C.

May 1-3 — American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago; sec.-treas., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

May 19-20 — Missouri Grain, Feed & Seed Assn., Hotel Connor, Joplin, Mo.; sec., D. A. Meinershagen, Eagle Mill & Elevator, Higginsville, Mo.

June 9-11—Indiana Grain & Feed Dealers Assn.; French Lick-Sheraton Hotel, French Lick, Ind.; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4, Ind.

June 10-11—Eastern Federation of Feed Merchants; Hotel Commodore, New York; exec. dir., Austin W. Carpenter, Sherburne, N.Y.

June 17-18—Georgia Feed & Poultry Conference; Dinkler Plaza Hotel, Atlanta; sec., Will L. Kinard, 3240 Peachtree Road Bldg., Room 210, Atlanta 5, Georgia.

NEW FEED MILL

NORTH BRANCH, MINN.—Work started recently on a new feed mill at the Hilltop Feed Store here. Reuben Erickson, manager of the store, says that the new mill will have far greater capacity than the old one.

You Sell The Best When You Sell GRAN-I-GRIT

THE GRIT WITH THE SHARPEST GRINDING EDGES EVER CUT

You are insuring your Future Profits when you sell GRAN-I-GRIT . . . the BEST Poultry Grit . . . because GRAN-I-GRIT will repeat in ever increasing volume for you.
That's WHY Dealers and Jobbers have become so enthusiastic about selling GRAN-I-GRIT.

GRANI-I-GRIT'S Sharper Grinding Edges Release More Nutrients from Feed

GRAN-I-GRIT with the sharpest grinding edges ever cut, grinds feed finer in the gizzard. Finer grinding of feed releases more nutrients for every pound of feed consumed.
These EXTRA valuable body building nutrients that GRAN-I-GRIT gives are a great aid in speeding growth, body development and weight gains of broilers and in getting more profitable feed conversion.
Top broiler growers and egg producers use and recommend GRAN-I-GRIT. They know from experience that GRAN-I-GRIT is the finest profit producing grit they can use.
GRAN-I-GRIT is insoluble. It will not dissolve and does not change the mineral balance of feed.

It's a Fact . . . GRAN-I-GRIT Has *Eye Appeal* for Poultry of All Ages

Poultry must consume the proper amount of grit to get maximum results from feed and GRIT MUST HAVE EYE APPEAL before poultry will eat it.

Side by side tests have proven that chickens and turkeys of all ages prefer a light gray grit with black specks . . . THE GRAN-I-GRIT TYPE . . . as much as 10, 15 and even 100 to one over grit of other colors.

When poultry raisers know this fact they insist on GRAN-I-GRIT.

HERE IS NEWS

Learn how GRAN-I-GRIT Research Proved FEEDING Larger Sizes of GRIT Makes More Money for Poultry Raisers.

There is a new GRAN-I-GRIT circular that explains in detail this new GRAN-I-GRIT feeding method that makes more money for poultry raisers. You, as a poultry grit Dealer or Jobber should write for a Free copy at once.

GRAN-I-GRIT is packed in 10 lb. and King Size (App. 22 lbs.) Feeder Packs and 25, 50 and 80 lb. bags.

NORTH CAROLINA GRANITE CORPORATION
MOUNT AIRY NORTH CAROLINA

HONEGGER LEGHORNS
A natural profit-maker with plenty of follow-up poultry feed sales. An exclusive with HONEGGER DEALERS.

BIG "H" FEEDS
Are tested and proved at Honeggers' 600 Acre Practical Test Farm. The superior results of Big "H" Feeds mean repeat orders and repeat profits.

FARM BUILDINGS
Honeggers' complete line of competitively priced, pre-built farm buildings are an extra "exclusive" profit plus for Honegger Dealers.

EQUIPMENT
Honegger Dealers can have equipment shipped prepaid with their cars of feed. Honeggers' full line of modern labor-saving equipment makes an excellent "door opener" for extra feed sales.

For Full Details Write or Phone Collect TODAY!

HONEGGERS'
FAIRBURY, ILLINOIS

Nutritionists Speak At Staley Mills Sales Meeting

KANSAS CITY — The modern farmer is a professional feeder, moving into an era of greater specialization, three authorities on animal and poultry nutrition told a meeting of 600 midwestern feed dealers and sales representatives of Staley Milling Co. Sept. 10-11 in Kansas City.

Dr. W. M. Beeson of Purdue University, Dr. Damon Catron of Iowa State College and Dr. J. R. Couch of Texas A&M College, the nutrition authorities, noted the agricultural trend in discussing the latest advances in cattle, swine and poultry feeding at a two-day "Professional Feed Dealer's Clinic."

Dr. Catron described results of recent tests at Iowa State on the effects of adding pepsin, a protein-digesting enzyme, to baby pig feeds.

"Our tests have shown," he said, "that baby pigs can gain efficiently on rations containing low-cost plant protein, without expensive milk protein, when pepsin is added to the diet. We have found that the degree of enzyme response in pigs decreases with age, and increases with stress."

Rapid changes in the field of poultry nutrition were covered by Dr. Couch. He pointed out that in 1930, average egg production was 128 eggs per hen per year, and by last year, it had advanced to 192 eggs.

"Today, with the high producing hens and properly formulated feeds," he said, "production may go as high as 288 eggs per hen per year. To do that, higher energy grains like corn and milo are best to use with highly fortified modern feeds."

High production records are effected, Dr. Couch remarked, by many factors such as the use of better, more highly bred birds and better management methods.

"The modern high producing hen weighs less," he said, "takes less feed to produce a hundred eggs, but the feed must be fully fortified."

He also pointed out that the digestive system of these modern birds is small. Changes in the protein and nutrient contents of modern grains must be recognized and compensated for in feeds designed for such high producing layers, Dr. Couch remarked.

The well known Purdue Supplement "A" was discussed by its originator, Dr. Beeson. After reviewing the nutrients in the supplement, Dr. Beeson remarked: "Cattle feeders today must use the best, most efficient methods available if they are to make money on their operation; feeding profits today are too narrow to do otherwise."

He said many feeders are producing good to choice cattle at 14 to 16¢ lb. by using average or poor roughage and a Purdue Supplement "A" type ration, usually 2 lb. per head per day.

Dr. Beeson also discussed the results that cattle feeders can expect from the proper use of stilbestrol for fattening cattle.

Other highlights of the meeting were a visit to the Staley demonstration farm near Liberty, Mo., where the crowd inspected the facilities for practical farm experiments in animal feeding, and a conducted tour through Staley's laboratory and feed plant.

SELLS FEED WAREHOUSE

CHANUTE, KANSAS — Harold J. Carl, operator of the Moorman Feed Warehouse here for the past 10 years, has sold the business to Mr. and Mrs. Clifford Erickson of near Petrolia, Kansas. Mr. Erickson has been engaged in farming. Mr. and Mrs. Carl and family have gone to Pine City, Minn., where Mr. Carl has purchased a sports shop and plans to erect cabins for a fishing resort.

● INCREASE FEED SALES!
● GET MORE REPEAT SALES!
● SATISFY MORE CUSTOMERS!

FEED MANUFACTURERS EVERYWHERE ARE DOING THIS WITH...

JERSEE VITAL-MIN

Here is a top quality Multi-Vitamin and Antibiotic Pre-Mix containing all the necessary Vitamins, Amino Acids, Trace Minerals and Antibiotics to make your feeds produce better results. The fast growing trend is toward Hi-Potency Vitamin and recommended levels of Antibiotic Fortification. Successful Feed Builders are increasing Sales, getting Steady Repeat Orders and developing greater customer satisfaction with JERSEE VITAL-MIN. They have relied on JERSEE . . . builders of Vita-Minized and Mineral Pre-Mixes for more than 35 years.

★ *Successfully Serving Feed Manufacturers from Coast to Coast*

JERSEE
VITAL-MIN
a Pre-Mix
VITAMINS MINERALS

THE JERSEE CO.

Write today for Dealers' Sales helps
MINNEAPOLIS
MINNESOTA

SILMO — *for Vitamin Oils.... for Dry Vitamin Supplements*

WORLDWIDE RESOURCES

FEED INGREDIENTS

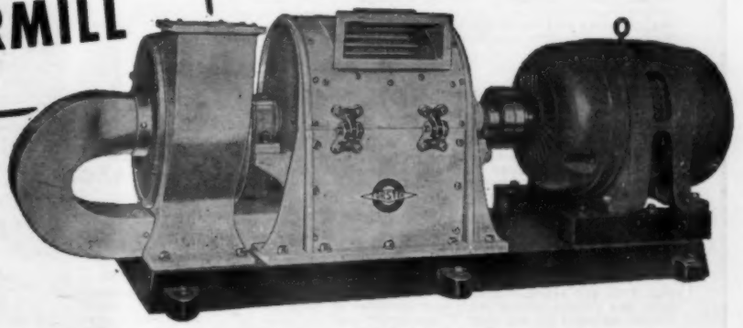
JUST A PHONE'S THROW AWAY

ESTABLISHED 1879
Woodward & Dickerson INC.
1400 South Penn Square, Philadelphia 2, Pa., U.S.A.
Telephone: LOcust 4-5600
Cable Address: "Woodward" Teletype: PH 109

DON'T BUY WITHOUT SEEING THE FORSTER MILL

WHY YOU GET TOP SERVICE FROM A FORSTER HAMMERMILL

FORSTER MILLS MADE IN FIVE SIZES—15 TO 125 HORSEPOWER



CHECK THESE MAJOR FEATURES:

✔ Sturdy and dust-tight construction. Heavy cast iron base and steel housing. Built for vibrationless operation.

✔ Heavy-duty anti-friction bearings. Bearing seats perfectly journaled and bearing locked on shaft.

✔ Extra-large main shaft made of alloy shock-proofed steel, accurately balanced and machined for vibrationless motion.

✔ Hammers made of specially-processed steel for fine cutting edges and long wearing quality. Hammers reversible.

✔ Screens closely and accurately perforated for maximum capacity. Made of special heavy-gauge steel. Screens easy to change

✔ Fan of one-piece cast steel in exclusive Forster design for high capacity operation.

FORSTER HAMMERMILLS are built to last. Write for full information and specifications.

The FORSTER MANUFACTURING COMPANY
MACHINES FOR MODERN MILLING

DEPARTMENT W
1421 S. McLEAN BLVD.
WICHITA 12, KANSAS

The Feed Man's Library

Reader Service Department

Feedstuffs

FEEDS and FEEDING, 21st Edition

By Frank B. Morrison

Part I—Fundamentals of Animal Nutrition
Part II—Feedingstuffs
Part III—Feeding Farm Animals

An accepted manual of feeds and feeding since the first edition in 1900 ..... $7.00

ANIMAL NUTRITION, 4th Edition (1956)

By Leonard A. Maynard

It covers the standard, constantly-needed facts on feeding farm animals, and also the newly discovered facts about how certain acids, minerals, vitamins, etc., can help in raising healthier, more productive animals. 474 pages, 77 illustrations and tables $7.50

BEEF CATTLE, 4th Edition

By Roscoe R. Snapp

Covers breeding, feeds, feeding, economic trends, equipment, etc. Includes a report of hundreds of feeding experiments. Has a special chapter on sterility by Dr. Harry Hardenbrooks, Jr., assistant professor of veterinary medicine, University of Illinois. 641 pages $6.50

RAISING SWINE—

By George P. Deyoe

A practical swine raiser's handbook. Stock selection, record keeping, feeding, care and handling, marketing techniques and preparing pork for home use. 447 pages, 201 illustration, 40 tables $5.50

THE STOCKMAN'S HANDBOOK (1955)

By Dr. M. E. Ensminger

Dr. Ensminger is Chairman of Department of Animal Husbandry, State College of Washington, and consultant to the Nucleonics Dept. of General Electric Co. Contains nineteen sections and in its scope is the equivalent of a dozen books on all phases of livestock breeding, feeding, management and marketing. Indexed for ready reference $8.50

RAISING LIVESTOCK

By Walter H. Peters and G. P. Deyoe

This book provides the owner, manager or caretaker of farm or ranch with easily found, specific suggestions for solving problems confronted in producing, handling and managing livestock, including preparing for market, selecting, feeding, housing, breeding and marketing influences. It tells of the many jobs to be done and exactly how to do them. 519 pages, 240 illustrations..... $5.75

LIVESTOCK PRODUCTION, New 2nd Edition (1954)

By Walter H. Peters and Robert H. Grummer

Designed for introductory courses in livestock. In this second edition all statistics have been brought up to date and the most recent findings in feeding, breeding and disease and parasite control of livestock are included. Comprehensive, yet elementary $6.00

DAIRY CATTLE FEEDING and MANAGEMENT, 4th Edition

By H. O. Henderson and Paul M. Reaves

Based on the original work by Carl W. Larson and Fred S. Putney. Expanded 10%, the Fourth Edition adds new chapters on minerals and vitamins, and much recent material on hay-crop silage, grass land farming, dairy cattle health programs, and digestion in the rumen and milk secretion. Designed for use profitably by the student and the practicing dairyman. 614 pages..... $6.50

DAIRY CATTLE—Selection, Feeding and Management, 4th Edition (1955)

By W. W. Yapp and W. B. Nevens, Agricultural Experiment Station, University of Illinois.

Part 1—Dairy Farming; Part 2—Selection and Breeding; Part 3—Feeding; Part 4—Managing; Part 5—Financial Aspects; Part 6—Milk Secretion; Care and Merchandising; Part 7—Producing Roughages; Part 8—Providing Good Buildings; Part 9—The Future of Dairying. A recognized text of great value to all engaged in dairying, especially to students..... $4.75

SWINE PRODUCTION—2nd Edition (1956)

By W. E. Carroll and J. L. Krider

A guide to organization, establishment, management, feeding and marketing operations in raising of hogs, 498 pages. 65 illustrations..... $6.50

MIDWEST FARM HANDBOOK—New 3rd Edition

A publication of The Iowa State College Press

Twenty big sections cover all phases of farming, including livestock, the dairy herd, livestock disease prevention, dairy products, poultry and poultry diseases, agricultural engineering, soils and crops, weed control, plant disease control, pest control and other valuable helps to the farmer, feed and fertilizer dealer, etc. 387 pages, with many illustrations in color..... $3.00

SCIENTIFIC FEEDING OF CHICKENS (1955)

By Dr. H. W. Titus

A small but absolutely authentic and concise treatment of vital information for feeders and feed manufacturers. 43 formulas for diets and mashes, vitamin content of over 60 feedstuffs; what feedstuffs are best, deficiency diseases; also relationship between feed consumption and egg production. 297 pages, hard binding $3.50

FEEDING POULTRY, 2nd Edition

By Gustave F. Heuser, Professor, New York State College of Agriculture, and the School of Nutrition

Meets the needs of poultry producers, feed dealers and poultry students for the latest authoritative information on how to raise the best poultry by employing modern feeding methods. It evaluates findings on the value of feeds, types of feed to be used and nutritive economy. Deals with feeding and management for various purposes, chicks, breeders and egg producers. 632 pages.... $7.50

POULTRY NUTRITION, 4th Edition Revised and Enlarged

By W. Ray Ewing

1,500 pages, 133 illustrations, of practical, factual information for feed manufacturers, feed dealers, hatcherymen, breeders. New chapter on antibiotics, new growth charts, feed formulas for rapid growth..... $12.50

POULTRY HUSBANDRY, 3rd Edition

By Morley A. Jull

526 pages, 254 illustrations, covers all aspects of the poultry business, from planning and building poultry plant to preparing poultry products for market. Breeding techniques, feeding procedures, disease control, incubation; it is an "encyclopedia" of poultry raising..... $6.50

POULTRY PRODUCTION—

By Leslie E. Card, Ph.D.

Eighth Edition, 416 pages, 216 illustrations and four plates. Deals with broiler production, flock management and marketing, breeding and selection, nutrition, disease control, etc. $5.00

HATCHERY OPERATION AND MANAGEMENT

By Ernest M. Funk and M. Richard Irwin

New, 1955; a practical guide to hatchery operation for the experienced and inexperienced. Covers all phases of the business, including advertising, selling, office procedures, labor costs, equipment, chick selection, sexing, etc. 350 pages, well illustrated $6.50

SUCCESSFUL POULTRY MANAGEMENT, 2nd Edition

By Morley A. Jull

447 pages, 188 illustrations, based on practical experience, brings practical helps for choosing breeds, increasing broiler and egg production, building range shelters, estimating egg output, buying feed, candling eggs, etc. $5.75

KEEPING CHICKENS IN CAGES, 4th Edition (1956)

By Roland C. Hartman, Editor Pacific Poultryman and Dale F. King, Dept. of Poultry Husbandry Alabama Polytechnic Institute

A thorough revision of this reliable work on cage laying plants. Newly illustrated and broadened in scope with addition of Professor Dale F. King as co-author. More about feeding-results of experiments with caged layers. The importance of protein and energy levels for the highly bred producing stock. 304 pages, 176 illustrations, cloth bound $5.00

TURKEY MANAGEMENT, 6th Edition (1955)

By Stanley J. Marsden and J. Holmes Martin

A text on turkey raising and marketing by Stanley J. Marsden, Poultry Husbandman at the U.S. Research Center, Beltsville, Md., and J. Holmes Martin, Head of the Poultry Department, Purdue University. Covers breeding, rearing, feeding, preparation for the market, shows, diseases and their prevention and control. 1,000 pages, 124 illustrations $7.00

RAISING TURKEYS, DUCKS, GEESE and GAME BIRDS

By Morley A. Jull

A guide to the raiser of specialized poultry. Based on forty years' experience in the field. A dollar-wise help in all aspects of this business. 467 pages, 265 illustrations $6.00

DOMESTIC RABBIT PRODUCTION (Oct. 1955)

By George S. Templeton, Director of U.S. Rabbit Experiment Station

A complete manual including chapters on selecting stock, equipment, feeds and feeding, breeding, management, meat production, marketing, diseases, slaughtering, wool production and the uses of rabbit meat and its preparation for the table. 210 pages, 78 illustrations, hard binding $3.50

THE FEED MIXERS HANDBOOK, 2nd Edition (1956)

By Ross M. Sherwood

A text for feed mixers wtih special reference to the nutritional aspects of feed formulation. A practical handbook for practical men. 208 pages, cloth bound $3.00

THE NORTHWESTERN MILLER ALMANACK (1955)

Annual statistical compilation, giving information about milling, grain, foreign markets, baking, feeding materials and production. A standard guide for over forty years. 144 pages..... $2.00

No C. O. D.'s

ORDER FROM

Reader Service Department
Feedstuffs
P.O. Box 67
Minneapolis 1, Minn.

Feed Service Bulletin Board

Helpful Notes on Feeding and Management for Feed Men and Their Customers

Getting Birds to Roost

Tips for getting chickens started to roost at an early age are reported by John W. Hough, extension poultry specialist at the University of Massachusetts.

One producer, he says, uses roosts right under his gas brooders. When the birds are still needing heat the brooder is raised and a slatted roost, built on two by sixes, is set under the hover. Additional roosts are provided about the pen as the birds get older.

This roosting business with the raising of confinement birds is very important if the laying pens are equipped with pits and roosts, he says. The earlier the age the replacement pullets can be started roosting, the better off a producer will be later on, Mr. Hough claims.

He suggests putting roosts in the brooder house when the chicks are only a week or 10 days of age. For those who have hot water systems, he suggests that roosts be put in when the hovers are lifted. A roosting rack that hooks to the pipes or nails to the wall will do the trick.

◆

Portable Pens for Calves

Dairy calves grown in the new, low-cost, portable, individual pens out on open pasture will grow as fast and will be healthier than calves raised in a closed, well-ventilated, conventional calf barn, says W. R. Murley, dairy specialist at North Carolina State College.

Tests at the North Carolina Experiment Station prove this, he says. Twenty four newborn calves, representing four dairy breeds, were raised under these conditions and compared with 24 similar calves raised in a conventional calf barn.

The calves were raised, during the past two winters and and summers, to four months of age in these individual, portable pens. They had fewer infections, fewer colds and less diarrhea than the similar calves raised in a closed barn.

The temperature and relative humidity were measured continuously in the barn and in a simulated portable pen located near the portable pen-housed calves. Generally, the temperature was lower in the portable pens, particularly during the winter months. The relative humidity was lower during the winter months in the portable pens than in the closed barn, Mr. Murley states.

The portable pens used, the college specialist explains, were 6 by 12 ft. in size. They can be made from scrap lumber and enclosed with mesh wire. Half of the top is covered with sheet metal and the sides on that same half of the pen are covered with burlap. This provides protection from rain and cross winds.

Portable pens should be located on a hillside, preferably on a new seeding of pasture, Mr. Murley says.

He advises that the pens be placed at the foot of the hill. Then each week, the dairyman should move up the slope so that new, clean ground is used. This prevents drainage of water from the previously used site to the new location.

By using the movable portable pen system, contamination by parasites is better controlled. Bedding can be used during winter months, Mr. Murley states. The important point is to keep the calf's quarters clean and dry. Draining the water away from or around the pen by a small trench helps keep the inside of the pens dry, he says.

◆

Foot Rot Troubles

Lameness from foot rot can reduce the breeding efficiency of male animals, especially rams and bulls, says Dr. M. E. Mansfield, veterinarian of the University of Illinois. The animals may be reluctant to stand and move around, if they have this disease, because their feet are so sore.

Dr. Mansfield says lameness, with reddening and swelling of the skin just above the hoof, between the toes or at the bulb of the heel, is the first indication of foot rot.

If the disease is not checked, it goes deeper into the affected feet. The diseased tissues give off a grayish-yellow discharge that has a characteristically bad smell. One or all of the feet may be involved.

He advises that a farmer trim the feet of his breeding animals, and promptly treat all foot injuries to help prevent foot rot. "Keep lots well drained and free of rubbish, because the germs causing the disease live only in damp, filthy areas. Gravel around the water tank will reduce the mud-hole problem," he says.

If symptoms of foot rot appear, the animals should be treated right away and taken away from the rest of the flock or herd, Dr. Mansfield suggests. Controlling the foot rot in

Whitmoyer

KEMITRACIN

the purified ANTIBIOTIC complex—
that does your feed antibiotic job better!

Send for complete scientific data.

WHITMOYER LABORATORIES, Inc.
MYERSTOWN, PENNA.

Their sniffing spells sales!

Put G-AN-EN nose appeal to work in your dog food!

G-AN-EN starts with nose appeal . . . follows through with flavor!

Here's a supplement that really makes sales flourish. A G-AN-EN fortified ration really stimulates a dog's appetite . . . gives dog owners a real desire to buy *your product.* G-AN-EN aroma is downright irresistible. Dogs really go for it! G-AN-EN flavor is just what "Fido" ordered. He loves it!

G-AN-EN is economical to use . . . gives you more food value to sell!

G-AN-EN is concentrated! 5% is all that's needed in the mix. It's a blend of important nose and appetite appealing nutrients: dried whole whey, dried buttermilk, cheese rinds, brewers' dried yeast, vitamin A and vitamin D_2 feeding oil, stability improved, niacin, sulphates of iron, zinc, copper and manganese chloride. With this combination, you're set for good business.

Contains vitamins, proteins, minerals!

6 vitamins

G-AN-EN offers vitamins A and D_2 feeding oil, stability improved, B_{12}, riboflavin, niacin (the anti-black-tongue factor), and pantothenic acid.

6 minerals

G-AN-EN offers the valuable milk minerals, calcium and phosphorus, plus the mineral salts, copper, iron, zinc and manganese chloride.

Milk protein

G-AN-EN offers milk protein which contains all the essential amino acids.

Comes in handy, dry form . . . fits ANY mix formula!

You'll find G-AN-EN quick and easy to blend. It's packed in 50-lb. bags.
Order G-AN-EN from Kraft Foods Company, 500 Peshtigo Ct., Chicago 90, Illinois.

Beat the Heat with NICHOLS #12's

If hot weather headaches have been getting you down, better check on Nichols #12 females. These hardy birds are bred with the ability to maintain good egg production during hot spells and to bounce back into top production *fast*.

They'll produce well all summer and maintain a high rate of hatchability that finds favor with hatcheries everywhere, opening new markets for hatching eggs in all broiler areas.

Why fight summer slump any longer, when you can avoid it with

NICHOLS #12's

Specially developed meat-type crossbreds for economical production of broiler hatching eggs.

Indian River – **NICHOLS** Crosses*

Vantress – **NICHOLS** Crosses*

*Three-way crosses that have given the industry new standards for health, feed efficiency and quality.

For information on this stock, and hatcheries in your area write:

NICHOLS POULTRY FARM, INC.

KINGSTON, NEW HAMPSHIRE

A. N. Weeks | F. G. Bemis, Jr. | A. H. Clarke

NEW DIRECTOR OF PRODUCTION—Judson Bemis, executive vice president of the Bemis Bro. Bag Co., has announced the appointment of A. N. Weeks as director of production. He will succeed A. H. Clarke. Mr. Weeks was formerly manager of Bemis' multiwall paper bag plant at East Pepperell, Mass. He has been succeeded as manager by F. G. Bemis, Jr. Mr. Weeks joined Bemis in 1919 at the Boston office. With the exception of two years' service in India, where he assisted in the supervision of Bemis jute and burlap facilities, he remained at Boston until 1938. In that year he was appointed manager at East Pepperell. F. G. Bemis, Jr., joined Bemis in 1954. He has been serving as administrative assistant to the vice president in charge of research and development. Until he retires on Jan. 30, 1957, Mr. Clarke will continue his several other responsibilities as a vice president and director of the company.

summer and fall during the breeding season will help to produce more uniform lamb and calf crops and also help to keep the disease from becoming a winter problem, he says.

◆

Dangerous Substitutes

Because of high feed prices, many ranchers and livestock farmers have got into trouble by feeding cheap roughage substitutes. The prolonged drouth has caused the feeding of baled Johnson grass, sorghum hay and cotton burrs, according to Dr. C. M. Patterson, Texas A&M College veterinarian.

He says several cases of prussic acid poisoning have been reported. He advises livestock men to break open any hay that may have been put up too green and let it dry out before feeding to cattle. Another warning is against the use of urea as a protein supplement where cattle are getting a small amount of roughage. He says the animals cannot utilize it because of low carbohydrate intake, which may cause urea poisoning.

◆

Records Can Show Waste

During the first two weeks of their life, 100 Leghorn pullet chicks will eat about 30 lb. of starter mash. The second two weeks this will step up to 80 lb. of mash, the third two weeks, 110 lb., and the fourth two weeks, to 140 lb.

This adds up to about 360 lb. of starter mash for 100 Leghorn pullets for the first eight weeks of life. Figures are based on all-mash feeding.

By keeping accurate feed records, a poultryman can make comparisons with these figures and tell if he is wasting feed, points out J. C. Taylor, extension poultry specialist at Rutgers University.

In addition to this feed, an abundance of water must be supplied at all times, using a one-gallon fountain for each 100 chicks during this period, shifting to automatic water fountains at four to five weeks of age.

Chick-sized feed hoppers should be used from the first day. Such hoppers, placed on egg cup flats, conserve feed. Since starter mash is the most expensive feed, Mr. Taylor advises care in eliminating waste. Fill hoppers only half full, he says. It is better to fill oftener and save feed.

◆

Antibiotics Fight Scours

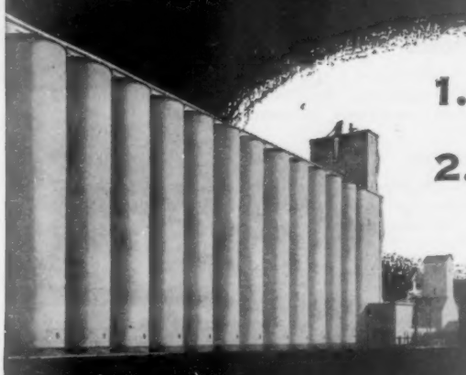
Antibiotics in a calf ration will help prevent calf-scouring, says Ralph Wayne, extension dairyman of the University of Minnesota.

A quick boost of antibiotics in pill form will usually stop scouring in calves. Most commercial calf starters contain antibiotics, according to Mr. Wayne. He says if a dairyman feeds skim milk he can regularly add antibiotics.

Calves are a lot like humans. Drafts, wet pens, colds and overfeeding will lower their resistance. Then their bodies can't supply enough antibodies to fight and prevent scours and colds, Mr. Wayne explains.

Letting calves have the first milk from the cow—the colostrum—will

OUR "FORMULA"... for serving the formula feed mixers



1. A QUALITY PRODUCT –
FROM THE CREAM OF THE SOYBEAN CROP

2. SERVICE – FROM OUR MILL TO YOURS . . . . **AS SCHEDULED!**
Here's a formula that works . . . . FOR YOU!

D.F.E. DIRECT FROM EMPORIA

KANSAS PHONE 3000 Soya PRODUCTS CO., INC. EMPORIA, KANSAS

give calves a healthy start in life. Colostrum is loaded with antibodies and contains as much as 200 times as much vitamin A as ordinary milk.

Mr. Wayne has four more tips for healthier calves:

1. Keep calves out of drafts.
2. Have calf pens clean and dry at all times.
3. Don't let calves eat moldy leftover feed. Keep calf-feeding pails clean.
4. Give calves the same amount of feed daily and at the same time of the day.

◆

Roughage for Ewes

If a farmer finds that he doesn't have enough hay to carry his pregnant ewes through the winter, he may be able to get by with supplementing the hay with roughages such as corn fodder, oat straw or corncobs.

Emmitt Haynes, extension animal husbandman at Iowa State College, says that good legume hay is by far the best kind of dry roughage for sheep, and if they get plenty of it they can be carried through the winter without any other feed. But if the supply of hay is limited or the price of hay is high, pregnant ewes can be kept in good condition by substituting non-leguminous roughages for half of the hay.

When low quality roughage is substituted for hay, however, Mr. Haynes says the ration must be supplemented with some high protein feed.

High quality corn silage is a good succulent feed for bred ewes and will help keep down the cost of winter feeding. Ewes have been wintered successfully on corn silage alone. But, Mr. Haynes points out, best results are usually obtained by limiting the amount to 2 or 3 lb. per head daily, and by using legume hay for the balance of the roughage. Spoiled, moldy, or frozen silage should never be fed to sheep.

The producer who feeds corn silage without any legume hay, should provide each ewe ½ oz. or slightly more ground limestone and at least ¼ lb. of a high protein supplement daily, he says.

Ultra-Life Conducts Farm Service School

SAUK CENTRE, MINN. — More than 35 feed manufacturers and feed manufacturer employees participated in a one-week refresher course for livestock and poultry service technicians here recently. The course, conducted by Ultra-Life Laboratories, Inc., East St. Louis, Ill., featured a review of the various Ultra-Life feeding programs, and a thorough discussion of new developments in poultry and livestock feeding.

Poultry sessions were under the direction of P. C. Blaeuer and Austin Windsor, while livestock discussions were under the direction of Gordon Reiners and Carl Hagen.

Those attending included Burt Shepperd, Walter Dodge, Bernard Faust, Austin Windsor, P. C. Blaeuer, Gordon Reiners, Carl Hagen, Hugh Seefeldt, William Trindal, Richard Schurtz, Edward Vier, Elmer Kinnenkamp, Art Stroschein, Peter Terres, Donald Westphal, Roger Westphal, Myron Smith, Floyd Munson, Lloyd Rath, Edward Munson, Willis Metcalf, Elmer Koepnick, William Costello, Joe Claude, William Primus, LeRoy Blom, John Bue, Howard Frane, George Lamey, Ben Olson, Wilmer Hop, Henry Rottjer, Chrys Athman, Mel Roekal, Levere Schultz, Clement Geerts, Joe Ellering, Lester Strecher and Ronald Olson.

Decatur, Ill., Named Class 2 Grain Market

DECATUR, ILL. — An improvement in Decatur's standing as a grain market was foreseen as the result of action by the Association of American Railroads in designating Decatur as a Class 2 market, one having officially supervised grain weighing facilities.

Formerly, weight certificates issued by Decatur elevators were not under official supervision.

Jess J. Beck, formerly superintendent of the Decatur Elevator Co., has been employed as the supervisor of weights by the Association of Commerce.

AN ECONOMICAL SOURCE of High Quality PHOSPHORUS

Pollyphos

Defluorinated Phosphate
19% Phosphorus

BUTLER CHEMICAL CO.
BOX 938
PHONE HOUSTON ORCHARD 2-7587
GALENA PARK, TEXAS

SALES AGENTS: Warner Brokerage Co., Inc., Minneapolis; Carroll Swanson Sales Co., Des Moines; James P. Sprigg Co., Los Angeles

J. H. LEFTWICH & CO., Inc.
BLACKSTRAP MOLASSES

Phone HEmlock 2-8771 Mobile, Ala. P.O. Box 78

Savannah, Ga.
New Orleans, La.
Tuscaloosa, Ala.
Jacksonville, Fla.
Corpus Christi, Texas
Nebraska City, Neb.

Shipments by Rail Tank Car, Truck Transports and Barge

Install BULK delivery service fast...at low cost ...with this little unit!

SPROUT-WALDRON FEED PIPER

pneumatic UNLOADING SYSTEM

Meet the big, growing demand for bulk deliveries this easy, low-cost way. Install Sprout-Waldron Pneumatic Unloading Systems in your present trucks.

The system converts any truck—van, dump, stake, or trailer—for PIPED-IN-FEEDS.* It can be installed at the factory or you can even install it yourself.

You get the same type of unloading service that is provided by the complete Feed Piper* Pneumatic Bulk Tank Truck. All types of feed can be pumped into the most out-of-the-way farm bins by air pressure through a flexible steel hose. The hose has almost unlimited "reach" and "lift." The booms, augers, downtime, and extra maintenance notoriously common to mechanical type trucks are eliminated. When permanent piping is installed to farm bins, feed is delivered as easily and as free of dust as fuel oil.

The blower and the feeder are both driven by a power take-off from the truck engine. The opening to the feeder, through which sacked or loose feeds are dumped, can be covered by a plate that fits flush to the bed of the truck. Your truck is not restricted in any way for use on other jobs.

Sprout-Waldron also offers the industry's most complete line of pneumatic bulk trucks, all auxiliary equipment for bulk handling, and entire bulk systems. Write for Bulletin 127.

SPROUT-WALDRON'S BIG PLUS ...gives you expert engineering guidance on your bulk handling requirements as well as on installations for your customers...plus personal instruction on maintenance and operation of equipment...plus a dependable source for spare parts...plus fast service for major repairs...plus 100% reliability. For best end results, start your bulk operation through Sprout-Waldron.

*FEED PIPER, PIPED-IN-FEEDS are trademarks and trade names of Sprout, Waldron & Co., Inc.

SPROUT-WALDRON
The Best in Milling Equipment Since 1866
61 LOGAN STREET • MUNCY, PA.
Exclusive Canadian Distributors: Strong-Scott, Limited, Winnipeg

PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS • MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS BUCKET ELEVATORS • CUTTERS, CRUSHERS, AND FEEDERS REELS, SEPARATORS, AND ASPIRATORS • BULK FEED TRUCKS • A. O. SMITH PERMAGLAS STORAGE UNITS BUHLER BROS. FLOUR MILLING EQUIPMENT

FE/430

AT BROILER MEETING—Here are some scenes from the recent meeting of the National Broiler Assn. held in Indianapolis, Ind. The meeting also included an All-Industry Exposition. In the photo on the left are (from left to right) Herman I. Miller, poultry division, U.S. Department of Agriculture, Washington; M. G. Whitehead, president of the Indiana State Poultry Assn., Goshen, Ind. and A. C. Zellner, vice president of the NBA, Janesville, Wis. In the center picture, A. G. Kriege, Kriege Hatchery Co., Edwardsville, Ill., is shown receiving a registration card from Miss Kay Sims, who helped decorate the booth of Swift & Co., Chicago. In the photo on the right are James C. Field, American Cyanamid Co., Salisbury, Md.; V. T. Currier, North Carolina Granite Corp., Mt. Airy, N.C., and H. M. Williams, American Cyanamid Co., Atlanta.

PFIZER GUEST SPEAKER—Jesse D. Jewell (seated) of Gainesville, Ga., who heads one of the largest integrated poultry operations in the world, addressed the recent annual sales meeting of the Chas. Pfizer & Co., Inc., agricultural sales division at Asheville, N.C. Grouped around Mr. Jewell on the grounds of Asheville's Grove Park Inn are (left to right) Dr. H. G. Luther, director of agricultural research for Pfizer; W. M. Reynolds, manager of Pfizer's Agricultural Research & Development Center, Terre Haute, Ind.; H. O. Dermody, sales manager of the agricultural sales division, and J. Jerome Thompson, manager of the division. Mr. Jewell, chairman of the board and president of J. D. Jewell, Inc., originated the idea for formation of the National Broiler Council and served as its first president.

☆

Camera Views of the News

☆

James R. Jones Ron A. Euler

APPOINTED — Two new appointments in the Kansas City branch of Fulton Bag & Cotton Mills have been announced. James R. Jones has been appointed sales representative for the Kansas City area, northeastern Kansas and northwestern Missouri. Ron A. Euler has been named sales representative in southern Kansas and southwestern Missouri. Mr. Jones, a native of Trezevant, Tenn., graduated from Ouachita College in Arkadelphia, Ark. He worked for a large milling company prior to joining Fulton. Following a series of promotions, Mr. Jones became office manager of the Kansas City branch and held this position until his new appointment. Born in Topeka, Kansas, Mr. Euler attended Wentworth Military Academy, Lexington, Mo. Before coming with Fulton, he was active in sales work with several large companies.

POULTRY HOUSE PRESENTED—John P. Weeks, director of research and education of Cosby-Hodges Milling Co., Birmingham, left, is shown presenting a Jazz Egg Factory, shown in background, to Dr. C. E. Laurent, chairman of the poultry division, University of Georgia College of Agriculture. At right is J. C. Hodges, Jr., vice president, secretary and treasurer of Cosby-Hodges, who participated in the presentation ceremonies at the Athens, Ga., campus. The new 28 by 64 ft. building was presented to the university by Cosby-Hodges for use in the university's expanding poultry research program. Dr. Laurent said the new house would be used in nutritional studies on cage layers.

PLANNING MIDWEST CONVENTION—Making plans for the Feb. 17-19 convention of the Midwest Feed Manufacturers Assn., to be held in Colorado Springs, Colo., is the convention program and planning committee. From left to right are Lloyd Larson, executive vice president, MFMA, Kansas City; Bill Kahle, Merck & Co., Kansas City; Pat Waters, chairman of the committee, General Mills, Inc., Kansas City; Darrell Young, Calcium Carbonate Co., Carthage, Mo., and Gil James, Ralston Purina Co., Kansas City. Another member of the committee not shown in the picture is Jack Bratten, Albers Milling Co., Kansas City. The move of the convention to Colorado Springs is being well received by members, according to Mr. Waters. While the Broadmoor will be convention headquarters, some events are being scheduled at the downtown Antlers Hotel. All reservations are now being assigned to the Antlers and may be handled direct or through the Midwest office at 20 W. 9th St., Kansas City, Mo.

Dairy Feeding Advice Given at University Of Illinois Event

URBANA, ILL.—Reports and exhibits on some feeding research were part of the recent Dairy Day at the University of Illinois.

One of the reports told of the use of massive doses of vitamin D, present in irradiated yeast, to prevent milk fever. K. E. Harshbarger said that feeding of irradiated yeast should begin 5 to 7 days before estimated calving date. He advised feeding 7½ oz. a day for not more than seven days. On the first day, only half the regular amount should be fed. The daily allowance should be divided into two feedings. He noted that feed companies are marketing special supplements containing irradiated yeast to prevent milk fever. Prof. Harshbarger said that extra calcium and phosphorus should be provided in the ration.

In a trial at the university, the following supplement was used: 96 lb. of dry molasses mixing feed, 16 lb. of irradiated yeast and 8 lb. of dicalcium phosphate. Prof. Harshbarger said feeding 3 to 3.5 lb. of this mixture a day for five to seven days before calving supplied the proper amount of vitamin D to prevent milk fever.

Another report by Illinois staff members told of research which showed that underfeeding retards growth and sexual development of dairy bulls. The study, it was pointed out, showed the need for feeding the sire properly.

Among other reports was one showing the importance of high quality roughage in the dairy feeding program.

Stilbestrol Helps Potato-Grain Feed

ST. PAUL—Stilbestrol—previously proven helpful in grain and legume rations for beef cattle—may increase gains on steers that are fed potatoes, too, according to University of Minnesota researchers.

In 1955-56 feeding tests at Minnesota's Northwest Experiment Station, Crookston, average daily gain for six steers that had stilbestrol added to a potato-grain-oats straw ration was 2.36 lb. Steers that had been fed a similar potato ration during the four preceding years at the station had averaged only 2.11 lb. gain, according to Homer D. Fausch, station animal husbandman. Feed costs also were lower with stilbestrol.

These results aren't entirely conclusive, Mr. Fausch says, because there are naturally some variations from year to year. But the study does indicate how stilbestrol can affect gains from a potato ration.

The steers in the 1955-56 trials received an average daily ration of 44 lb. of potatoes, 8.5 lb. ground grain, 4.4 lb. oat straw, 1.02 lb. soybean meal and 11 milligrams of stilbestrol.

Feeding trials at Crookston have consistently shown that potatoes themselves make a good feed for beef cattle. They produce good daily gains and satisfactory carcasses when fed with oat straw and grain, Minnesota scientists said.

Fair Profit Prospects For Lamb Feeding Seen

AMES, IOWA—Prospects for profit from lamb feeding are moderately good for the year ahead, in the opinion of Francis Kutish, farm economist at Iowa State College.

Supplies will be less than a year ago, he said. He noted that more ewe lambs are likely to be held back for breeding purposes.

The big question, said the economist, is whether profits will be best on the early or late-fed crop. This depends largely on whether wheat pastures develop. Normally, in years of good wheat pasture, profits are better on early-fed than on late-fed lambs.

Seasonal declines in lamb prices are expected this fall, Prof. Kutish said, as marketings of grass-fed lambs increase. He added that lamb marketings the rest of this year will probably average close to or slightly below figures of a year earlier, barring unusual drouth.

DIAMOND V BRAND

Fortify your feeds with

LIVE YEAST CULTURE

(Especially Prepared for Dry Mix Feeding)

Supplies: Vitamin B_{12} activity, live yeast digestive enzymes, B complex vitamins, plus other potent unidentified factors. Improves appetite, digestion (including rumen aid), health, growth, production. Increases feed utilization — lowers feed cost.

Live yeast values improve feeding results in recent State conducted tests.

New Yeast Folder Available

write . . . DIAMOND V MILLS, INC. • CEDAR RAPIDS, IOWA

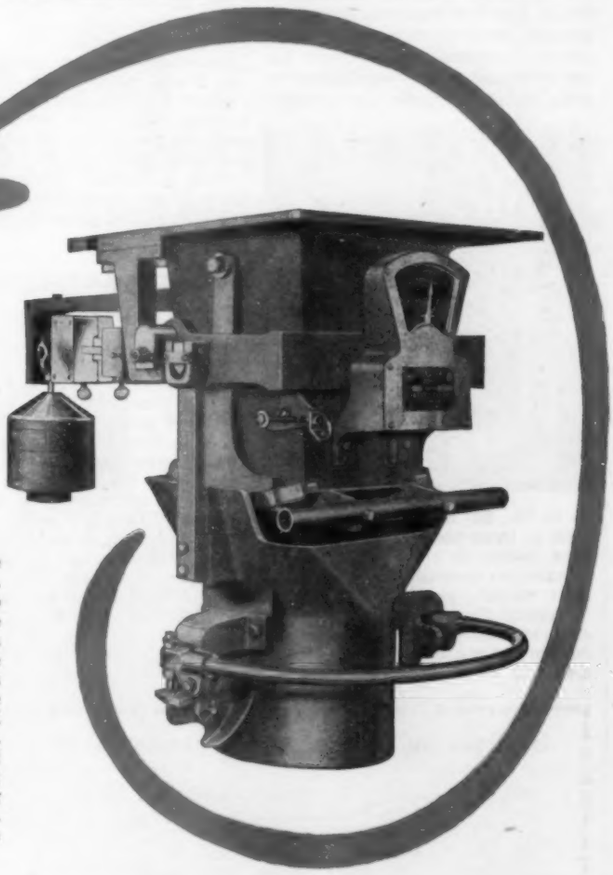
EUREKA

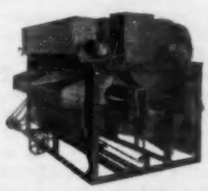
O.K.

BAGGING SCALE

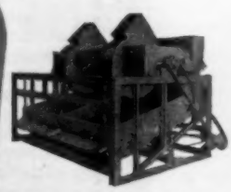
Light in weight, easily portable . . . fast, accurate weighing up to 200 lbs.

The Eureka OK Bagging Scale is speedy, accurate and simple to operate. Anyone can operate it . . . and its semi-automatic features enable operator to weigh and bag materials at an exceptional rate. One slip-on motion attaches bag securely and releases automatically at a touch of a lever. You'll like the OK Scale too because it's easily portable. By means of optional accessories (tubular supporting frame equipped with casters, or OK Scale Holders) one OK Scale can be used to serve several hoppers or bins. Made in two models: Model A with bag bell and rubberized ring for holding cotton or burlap bags; Model B with bag clamps as shown above, for holding cotton, burlap or paper bags, including multiwalls. Why not get all the specifications; see how little the cost . . . write for Bulletin 502.





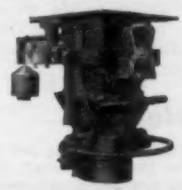
Super Cleaner—Receiving Separator



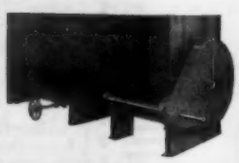
Hi-Capacity Receiving Scalper

Vertical Batch Mixers

Corn Cutters and Graders



OK Bagging Scale—Series A, B



Horizontal Batch Mixer

Cut Crimper—Single Pair Roller Mill

Duplex Agitator Molasses Mixer

The Eureka trademark in Flour, Feed, Seed, Grain and Cereal Machinery and Equipment is like the Continental Mark II in cars. It's the recognized symbol of a superior product.

EUREKA

S. HOWES CO., INC. SILVER CREEK, N. Y.

Since 1856

PROVED ON-THE-FARM

VICTOR FEEDS

THE CREVE MILLS
CREVE, NEBRASKA
Division of the Lenhoff Grain Co.

The original vitamin E in feed ingredients may be gone by the time you mix your feeds. That's one reason why you should use

Myvamix

VITAMIN E

FEED SUPPLEMENT

Information and prices from
Distillation Products Industries, Rochester 3, N. Y.

Distillation Products Industries
is a division of
Eastman Kodak Company

Worth Looking Into

New Products
New Services
New Literature

This reader service department announces the development of new and improved products, new services and new literature offered by manufacturers and suppliers. Claims made in this department are those of the firm concerned. Use the accompanying coupon to obtain the desired information.

No. 5560—Display Bag Frame

The Bag Display Co. has available literature and a price list of its product called the Expander display bag frame. Designed for retail stores, the product consists of a metal frame which is inserted into an empty bag for displaying in show windows or instore displays. Frames are available

to fit 25-, 50- and 100-lb. bag sizes, such as those used in the feed, fertilizer, insecticide and other industries. Advantages claimed for the frame are light weight, neat appearance and durability. Secure more complete details by checking No. 5560 on the coupon and mailing it to this publication.

No. 5555—Feed Fortification Product

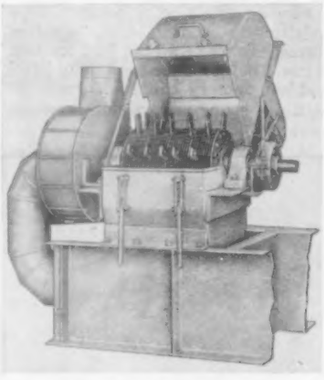
The New England By-Products Corp. announces the addition of a new feed fortification product to its line. Known as Newbyco Vitalizer, the product is especially developed for ruminant feeding. The product is claimed to be a high potency vitamin A, D and B complex compound and makes it possible for the animals to better utilize poor roughage. It is said to be equally effective for the feeding of dairy cows, calves, beef cattle and sheep. Further information can be obtained by checking No. 5555 on the coupon and mailing it to Feedstuffs.

No. 5557—Poultry Vaccination

Dr. Salsbury's Laboratories offers a new book "Vaccination of Poultry" to poultrymen through its dealers. Highly illustrated, the book tells the story of poultry vaccination, tracing the production and testing of vaccines under exacting conditions and explaining the prevention of various diseases by modern vaccination methods. Included in the book are frequently asked questions concerning vaccination with the answers. A practical vaccination program and record chart are featured which is also available in chart form for poultry house use. The booklet is available by checking No. 5557 on the coupon and mailing it to Feedstuffs.

No. 5558—Hammer Mill

A newly designed hammer mill to handle a wide range of grinding and product reduction in a variety of industries has been announced by the Myers-Sherman Co. An innovation is the wide range of adjustment permitted by the hammer arrangement. There are two rows of holes in circles on the rotor plates. By placing hammers on the outside row the increased hammer tip speed and reduced clearance between the screen and the hammers provide for very fine or finish grinding. For coarser grinds, fewer but larger hammers are used, and these are attached with



pins, to the inside row of holes. This gives slower tip speed, greater clearance, and fewer impact points, producing large, uniform particles. An alloy steel shaft 5⅝ in. in diameter is used for the rotor which is designed to operate at a hammer tip speed of almost 25,000 ft. per minute. Oversize bearings and the double universal joint direct drive are other features. An electronic control makes possible the operation of the mill from any location in the mill or plant. An oversize fan is used for conveying material as fast as it is ground. The fan can also be supplied as a separate unit, powered by a separate motor, for long conveying distances. For more complete details check No. 5558 on the coupon and mail it to this publication.

No. 5559—Supplement

A feed supplement, called by the trade name, Auropep Crumbles, for swine, cattle and sheep, is being marketed by the American Cyanamid Co. The product is prepared in crumbled pellet form that "is easy to mix with any type of feed and allows uniform availability of the supplement in the ration," according to company officials. They recommend the supplement to improve growth rate; increase feed efficiency; suppress secondary bacterial infections during periods of stress such as vaccination, high temperatures and moving; and to prevent and reduce losses due to outbreaks of specific diseases such as bacterial enteritis in swine, bacterial diarrhea in dairy and beef calves and enterotoxemia in sheep. Best results are obtained when the product is spread on top of or mixed with each day's ration, according to the company. To secure more complete details check No. 5559 on the coupon and mail it to Feedstuffs.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 5518—Automatic net weighing machine for weights up to 10 lb., Exact Weight Scale Co.

No. 5519—Concentrated insecticide for use as a grain proctectant, Pest Control Division, J. L. Holcomb Manufacturing Co., Inc.

No. 5520—12-in. floor cleaning machine for areas up to 2,000 sq. ft., Multi-Clean Products, Inc.

No. 5521—Bulk feed body, Simonsen Manufacturing Co.

No. 5522 — Flavor ingredient for phenothiazine-treated salt, International Salt Co.

No. 5523—Poultry water and feed product designed to aid growth and protect against disease, American Cyanamid Co.

No. 5524 — Feed, seed and grain handling equipment, King & Hamilton Co.

No. 5525—Feed bin design, Sprout, Waldron & Co., Inc.

No. 5526—Feed body for bulk and sacked feeds, Simonsen Manufacturing Co.

No. 5527—Vacuum cleaner for industrial use, Burrows Equipment Co.

No. 5528—"Free-running" salt process, Morton Salt Co.

No. 5529—Cleaners and scalpers for soybeans, S. Howes Co., Inc.

No. 5530—Booklet describing Christie's Spizzerinktum New Hampshires, Granite Whites and White New Hampshires.

No. 5531—Farm and dairy cleanser, Pennsylvania Salt Manufacturing Co.

No. 5532—Portable Formula feed blender, Barnard & Leas Manufacturing Co., Inc.

No. 5533—Antibiotic, vitamin and mineral product for swine feed or drinking water, American Cyanamid Co.

No. 5534—Poultry and livestock disease treatment with nitrofuran drugs, Hess & Clark, Inc.

No. 5535—Brochure on bolted steel tanks, Columbian Steel Tank Co.

No. 5536—Valve bag packer using fluidizing principle of conveying material, Black Products Co.

No. 5537—Rodent control unit, Solvit Chemical Co.

No. 5538—Public storage plan for warehousing alfalfa pellets under inert gas pressure, Grain Elevator Warehouse Co.

No. 5539—Stream splitter for dividing single stream of dry, free-flowing material, Sprout, Waldon & Co., Inc.

No. 5540—Booklet on high-level antibiotic feeding, Commercial Solvents Corp.

No. 5541 — Phenothiazine wormer for cattle and sheep, VyLactos Laboratories, Inc.

No. 5542 — "Pallet bag" for "squared-off" appearance, St. Regis Paper Co.

No. 5543—Poultry feed additive, Heterochemical Corp.

No. 5544—Dauber lid for screw worm smear containers, Dr. L. D. Le Gear Medicine Co.

No. 5545—Dairy cattle feeding program, Pillsbury Mills, Inc.

No. 5546—Bulk delivery of molasses feed, Baughman Manufacturing Co.

No. 5547—Vitamin D product for treatment of milk fever in dairy cattle, Silmo Chemical Corp.

No. 5548—Grain shovel devices, Foster & Felter Co.

No. 5549—Counter display for self-service of nf-180 tablets, Hess & Clark, Inc.

No. 5550 — Bulk feed tank with 2½-5 ton capacities, Martin Steel Products Co.

No. 5551—Dog food, Vitality Mills, Inc.

No. 5552—Water tube boilers, Nebraska Boiler Co., Inc.

No. 5553—One-man push button loading of boxcars and trucks, R. T. Sheehan Co.

No. 5554—Liquid compounded fat for alfalfa dehydration and feed mixing, Swift & Co.

Eastern Federation Plans Convention

SHERBURNE, N.Y.—The Eastern Federation of Feed Merchants has announced that it will hold its annual convention in the Hotel Commodore, New York City, June 10-11, 1957.

Send me information on the items marked:

- ☐ No. 5555—Feed Fortification Product
- ☐ No. 5557—Poultry Vaccination
- ☐ No. 5558—Hammer Mill
- ☐ No. 5559—Supplement
- ☐ No. 5560—Display Bag Frame

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

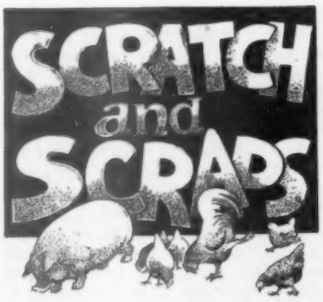
BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

P. O. Box 67,

Reader Service Dept. Minneapolis 1, Minn.



It was Parents' Day at a small country school. Mrs. Smith was sitting with her eyes glued on the curtain when it suddenly rose on little Harry Jones attired in a toga. "Friends, Romans, countrymen," he declared, "lend me your ears." Leaning over her neighbor's shoulder, Mrs. Smith was heard to comment in an iron whisper, "Wouldn't be Matty Jones' boy if he wasn't borrowing something!"

◆ ◆ ◆

Smith's symptoms were alarming enough to take him to a doctor for a check-up. Having fortified himself at a tavern, he went through the examination and awaited the report in the reception room. When the doctor appeared, Smith asked eagerly, "What does the report show, Doctor?"

"According to this analysis," answered the medico, "there is every indication that a small percentage of blood is getting into your alcohol system."

◆ ◆ ◆

Of course the Russians have freedom of speech.

Nevertheless, the following ad appeared in one of the largest daily papers: "Talking parrot has disappeared. I want it definitely understood that I do not share its political opinions."

◆ ◆ ◆

A visitor stopped in at a local club room to pass the time of day and noticed three men and a dog playing draw poker. "Sure must be a smart dog," commented the stranger.

"Naw, he ain't very smart," piped up one of the trio. "Every time he gets a good hand he wags his tail."

◆ ◆ ◆

A newspaper held a competition for the best essay and the shortest on a typical experience with government bureaucracy. The following took first prize:

Customer at the Post Office: "May I—"

Clerk: "Next window."

with DEMON
Steamed Rolled Oats
CUSTOMERS CAN SEE ALL THE OATS!
WRITE TODAY FOR PRICES
DES MOINES OAT PRODUCTS CO.
2000 E. Grand Ave. Des Moines, Iowa

Crampton's
APPLIED ANIMAL NUTRITION
The Uses of Feedstuffs in the Formulation of Livestock Rations
Now published. 478 pp., ill., $6.50
W. H. FREEMAN & COMPANY
660 Market St., San Francisco 4, Calif.

Turkey Testings Show Increase

WASHINGTON — Indications of further increases in poultry production are seen in the U.S. Department of Agriculture's most recent report on turkeys and chickens tested by official state agencies.

The number of turkeys tested for pullorum disease during August was considerably larger than a year ago. The number of heavy white breeds tested was 52,795, compared with 16,188 in August last year. Other heavy breeds tested totaled 74,783, compared with 43,686 a year ago. Large percentage increases also were shown in July.

The number of light breed turkeys tested during August was 49,266, compared with 43,482 in August last year.

In 40 states for which comparisons are available, 1,833,632 chickens supplying broiler hatching eggs were tested for pullorum disease during August—an increase of 36% over a year earlier. The number of chickens tested for pullorum disease for other purposes during August was 466,811, down 3% from a year earlier.

Equipment Gift

FAYETTEVILLE, ARK.—The University of Arkansas' Agricultural Experiment Station has recenty received a gift of special equipment for the new Animal Science Building, according to Dr. John W. White, associate director of the station. Eight Kline chick batteries were received from Commercial Solvents Corp. of Terre Haute, Ind., for use in nutritional research. These batteries are already in use in studies on chick nutrition, according to Dr. E. L. Stephenson, project leader of the work.

Davenport Exchange Elects New Officers

DAVENPORT, IOWA—At the recent annual meeting of the Davenport Grain Exchange, John M. D. Burrows, plant manager, Ralston Purina Co., and a director of the exchange, was elected to the presidency, succeeding W. J. Fernandez of Pillsbury Mills, Inc., who served two years in the post.

Other officers elected included: Richard A. Koenig, International Milling Co., vice president, and James R. Trippensee, Ralston Purina Co., secretary-treasurer. Joseph L. Slater, Jr., was re-appointed as chief inspector and weighmaster for the exchange.

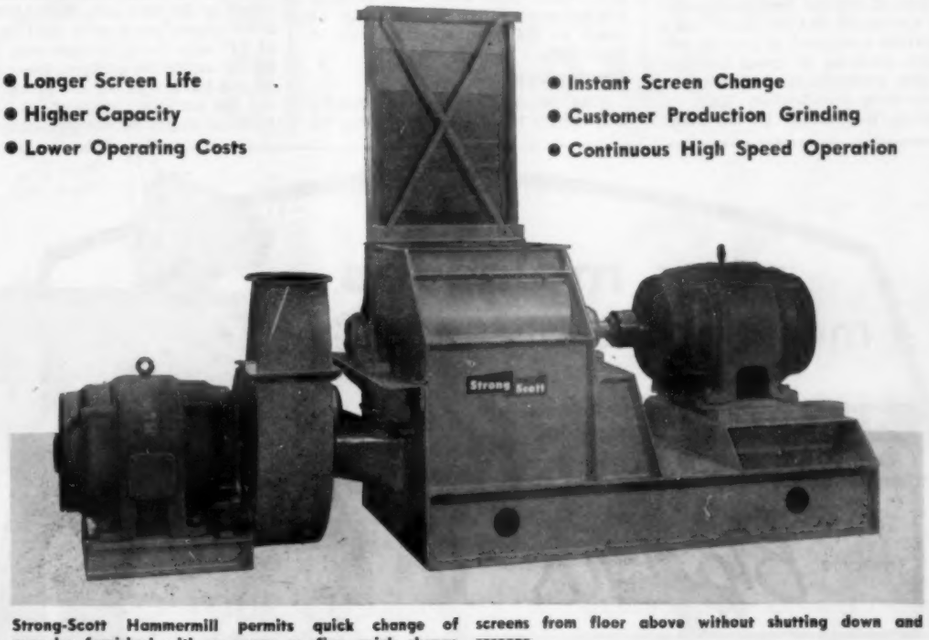
At the meeting, it was announced that the volume handled by the exchange continues to grow and a new volume record is in sight this year.

Advertisement

NEW PRODUCT NEWS

NEW HAMMERMILL WITH SPECIALLY HARDENED, QUICK-CHANGE SCREENS...

- Longer Screen Life
- Higher Capacity
- Lower Operating Costs
- Instant Screen Change
- Customer Production Grinding
- Continuous High Speed Operation



Strong-Scott Hammermill permits quick change of screens from floor above without shutting down and may be furnished with as many as five quick change screens.

The New Strong-Scott Hammermill is the first mill with the new hardened, long life screens* for high capacity and high speed grinding with less wear. We guarantee hardened, long life sectional screens to last at least ten times as long as ordinary screens under normal grinding conditions. This means lower operating and maintenance costs. Designed for custom or production grinding.

Reversible rotation through a single electrical switch arrangement—another plus feature of the Strong-Scott Hammermill eliminates manual turning of worn hammers and minimizes shut-down time. The entire frame and chamber are welded, heavy-duty steel construction. The Phillips Feed Mill of Downsville, Wisconsin, reports better than 20% increase in capacity and has not worn out a hardened screen in 14 months of steady operation.

Available in models ranging from 40 HP to 125 HP.

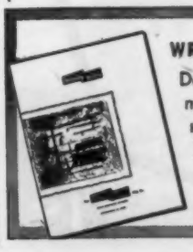
The new mill is also available without the quick change attachment, but still utilizes the hardened, long-life screens, with sharper edges.

Another outstanding feature of the Strong-Scott Hammermill is the independent Blower Unit. This unit has no operating connection with the mill proper. Instead, the blower fan is directly connected to a separate motor, mounted on the blower housing. As a result the entire power of the grinding motor is devoted to grinding alone. The combination of two motors actually increases the mill capacity as compared to a single motor of equivalent power.

Capacities in pounds per hour range from 2400 to 25,000, depending on the feed material and the screen openings.

This new Strong-Scott Hammermill contains the latest advancements in modern design.

*Patent applied for.



WRITE FOR FREE COLOR BULLETIN

Detailed information on the equipment shown above will be sent on request. Simply drop a card or a letter to the Sales Department at the Strong-Scott Mfg. Co. 451 Taft Street, Minneapolis 13, Minnesota.

The Strong Scott Mfg. Co.
Equipment Designed for Better Processing
451 TAFT STREET, MINNEAPOLIS 13, MINN.
Dept. FS-929

What's New in Feeding
Putting Research to Work

A Comparison of the Growth Of Chicks Fed Diets Containing Different Quantities of Zinc

● Arnon L. Mehring, Jr., John H. Brumbaugh and Harry W. Titus, Lime Crest Research Laboratory, Limestone Products Corporation of America, Newton, N.J.; Poultry Science, Vol. 35, No. 4, page 956 (July, 1956).

The question of zinc in feeds, particularly in swine feeds, is of current interest to feed manufacturers as a result of research findings that supplemental zinc will aid in combating parakeratosis, a skin disease which occurs in pigs. In cases where zinc is added to mineral mixes to be used in swine feeds, the question arises as to whether or not such zinc-fortified mineral mixes can be used in feeds for poultry or other livestock. The research reported in this article was conducted to determine the effects of feeding relatively high levels of added zinc in the ration for young growing chickens.

Ten lots of day-old New Hampshire chicks (20 chicks per lot) were fed a basal ration composed of ground yellow corn, soybean oil meal and fish meal, plus complete mineral, vitamin and antibiotic fortification. Zinc, as zinc oxide, was added to the basal ration in amounts to give levels of total zinc intake ranging from 42 ppm up to 820 ppm in the diet of the chick. These levels took into account the naturally occurring zinc in the feed as well as the zinc dissolved into the drinking water from the galvanized watering pans which were used. The unsupplemented basal ration was found by analysis to contain 36 ppm of zinc and analysis of the drinking water showed it to contain 3 ppm of zinc dissolved from the surface of the water pans.

The results of the nine-week experiment showed that chick growth and feed efficiency were not affected by any of the levels of zinc which were fed. Chicks fed the highest levels of zinc grew just as rapidly and efficiently as those fed the lowest levels.

According to the authors, the results indicate that mineral mixtures which contain sufficient zinc to provide 100 to 200 ppm of added zinc in a manufactured feed for pigs may be used without deleterious effects in starting and growing feeds for chicks. The results also show that growing chicks apparently can tolerate as much as 800 ppm of added zinc in their diet.

COMMENTS:

This research is self-explanatory and should be of general interest to those who have been uncertain about using zinc-fortified mineral mixes in feeds other than for swine.

●

Antibiotic Concentration in Eggs from Hens on Chlortetracycline-Supplemented Diets

● Nicholas Raica, Burt W. Heywang and A. R. Kemmerer, University of Arizona, Tucson, and USDA Poultry Husbandry Research Branch, Glendale, Ariz.; Poultry Science, Vol. 35, No. 4, page 894 (July, 1956).

Because of the widespread use of antibiotics for growth stimulation and disease control in poultry and livestock, these researchers became interested in finding out if antibiotic residue could be detected in eggs from hens fed varying levels of the antibiotic chlortetracycline (Aureomycin).

In these experiments, the hens used were White Leghorns approximately one year old. An all-mash basal ration was fed with the antibiotic added at levels of 50, 100, 200, 500, 1,000 and 2,000 grams per ton of feed. A total of 747 eggs from 91 hens was assayed for antibiotic content. Hens in the 50 and 100 grams per ton groups were fed the antibiotic supplement for two to three weeks during the laying period. The 200 gram per ton level was fed for two to three weeks prior to collection of the eggs and during the collection period. The 500, 1,000 and 2,000 gram per ton levels were fed to hens for the first 16 days of a 26-day egg collection period.

Assay of the eggs from hens fed the 50, 100 and 200 gram per ton levels showed that no detectible amount of the antibiotic was present.

Antibiotic was found to be present in eggs from hens fed the 500, 1,000 and 2,000 gram per ton levels of chlortetracycline. The amounts of antibiotic found to be present varied from 0.018 to 0.141 microgram per gram of eggs. Eggs from hens fed the 1,000 and 2,000 gram per ton levels contained approximately equal amounts of antibiotic, and the amounts were only slightly higher than in the eggs from hens fed 500 grams of the antibiotic per ton. It was found that it took from four to seven days for the eggs to show the presence of antibiotic after feeding was started, and an average of 4.1

You can add molasses to pre-mixed feeds fast and efficiently with Customix. It's a complete package unit specially designed for the custom miller.

The direct-connected, high-speed agitator assures the production of 3 to 5 tons per hour of lump-free, high-quality feed. Molasses is actually driven into the fiber of the feed without heating at the correct percentages. Furnished complete with motor-driven pump and strainer, and gauges, valves, and meter in place on a supporting frame.

For medium-size and large mills, Coldmix with high-speed agitator is available. Capacities: 7 to 20 tons per hour.

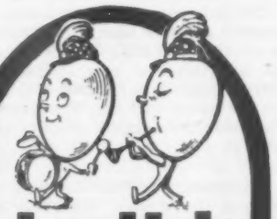
With these units, as with all Sprout-Waldron machines, you get BIG PLUS values at no extra cost—expert engineering guidance on installation and applications . . . finest workmanship and service . . . most advanced features . . . and a reliability that is based on 90 years of dependable service to the feed industry and the desire to continue for another century.

Write for Bulletin 98 (Customix), Bulletin 121 (Coldmix).

SPROUT-WALDRON
The Best in Milling Equipment Since 1866
61 LOGAN STREET • MUNCY, PA.
Exclusive Canadian Distributors: Strong-Scott, Limited, Winnipeg

PELLET MILLS • HAMMER, ROLLER, ATTRITION, AND BURR STONE MILLS • MIXERS • SCREW, BELT, AND PNEUMATIC CONVEYORS • BUCKET ELEVATORS • CUTTERS, CRUSHERS AND FEEDERS • REELS, SEPARATORS, AND ASPIRATORS • BULK FEED TRUCKS
A. O. SMITH PERMAGLAS STORAGE UNITS
BUHLER BROS. FLOUR MILLING EQUIPMENT

FE/443



build a local market for quality EGGS

You can play an important part in promoting a quality Egg Program by helping egg producers: (1) set up a good feeding program; (2) find a premium price market for their eggs in nearby food stores.
Now you can gross an extra $60 per week from each 2,000 layers on this program by marketing top quality eggs. Housewives are willing to pay premium prices to get good eggs. All you do is lease a FRESH EGG MERCHANDISER and LOAN it to a Food Store in a nearby town to do your selling. Tests by Cornell, Missouri and Nebraska Universities prove that this self-service salesman can sell 600 doz. eggs per week. No investment . . . just LEASE a FRESH EGG MERCHANDISER for $24 per month with option to purchase if you wish. It's a sure way to make money with eggs, plus a profit on feed sales. WRITE TOBIAS ENTERPRISES, 225 NORTH MICHIGAN AVE., CHICAGO 1, ILLINOIS.

The FRESH EGG Merchandiser

"FINISH FEED"

CASSVILLE, MO.—A carload of sacked feed figured in the final run of the nation's shortest commercial railroad recently. The feed was the last payload of the once-thriving Cassville & Exeter Railroad, a 4½-mile line connecting this town of 2,500 with Exeter, Mo. The railroad was founded 60 years ago because the main line of the Frisco railroad missed Cassville, a county seat. It operated casually—making trips only when it had a load. The road did a thriving business until trucks gradually cut into its volume. Lack of income forced it to shut down. The final run of the old diesel engine and an empty boxcar was delayed a day because the feed hadn't been unloaded.

days was required for the antibiotic to disappear from the eggs after antibiotic feeding was stopped. The amount of antibiotic was found to vary considerably between individual hens, and also the amount in eggs from the same hen fluctuated during the feeding period. The highest percentage of eggs containing chlortetracycline as well as the highest concentration of the antibiotic, occurred during the second week of antibiotic supplementation. All eggs became negative (showed no detectible amount of the antibiotic) during the first week after removal of chlortetracycline from the feed.

COMMENTS:

These results show that there will not be any chlortetracycline in eggs from hens fed up to 200 grams per ton of the antibiotic and that it is necessary to feed levels of 500 grams per ton or more before it is possible to detect the presence of the antibiotic, using the pad-plate assay which was used by these investigators. It is also interesting to note that all traces of the antibiotic disappeared from the eggs during the first week after antibiotic supplementation was discontinued.

Dow Starting Another Round of Expansion

MIDLAND, MICH.—The Dow Chemical Co. has embarked on another round of "vigorous expansion" and expects to spend considerably more than $75 million in the current fiscal year, Dr. Leland I. Doan, Dow president, told stockholders at the company's annual meeting here recently.

More than 86% of the outstanding Dow shares were represented at the meeting either in person or by proxy. The shareholders reelected all incumbent members of the board of directors for the ensuing year.

Dr. Doan declared that an expansion program is necessary because "we are already crowding capacity in some of our basic building-block lines such as chlorine, bromine, ethylene, power and so on." The $75 million-plus proposed for expansion compares with about $60 million spent in fiscal 1956 and $50 million in 1955, he said.

The Dow president noted that some expansion now in progress will further decentralize the company's operations and said that decentralization will be continued in the future whenever it best serves Dow's long-range interests.

New plant locations being developed in the current year include Plaquemine, La., Lee Hall, Va., Hanging Rock, Ohio and Riverside, Mo.

Dr. Doan said that while the company's increase in earnings of nearly 60% in fiscal 1956 ended May 31 was "particularly pleasing," stockholders should not anticipate a similar percentage increase in fiscal 1957. "In the two previous years we had some excesses of capacity whereas this last year we were operating in most lines at about the practical limits of capacity," he said.

Dr. Doan noted that Dow workers again established a new safety record.

Spread of Anthrax Said to Be Unlikely

PINEDALE, WYO.—Danger of anthrax spreading from Sublette County, Wyoming, has been termed "slight" by a Pinedale veterinarian aiding in the investigation of the outbreak.

Dr. Bert Reinow said that the outbreak appears to be "self-limiting." He said it has been confined to a small area in which three cattle have been known to die of the disease.

The anthrax outbreak was reported recently in an area of Wyoming described by state authorities as "the upper range of the Green River division of Bridger National Forest, a small portion of the south fork of Fish Creek in Teton National Forest, and the upper part of the Salt Creek draining in Shoshone National Forest."

The veterinarian said no quarantine was in effect.

304 Pages
176 Illustrations
Cloth-Bound

KEEPING CHICKENS IN CAGES
FOURTH EDITION (1956)

By Roland C. Hartman
Editor, Pacific Poultryman
and Dale F. King
Head, Dept. of Poultry Husbandry
Alabama Polytechnic Institute

The Only Complete Book on Management of Layers in Individual Cages

$5.00 per copy, Postpaid

NO C.O.D.'s

A thorough revision of the 1953 edition, and broadened in scope by the addition of Professor Dale F. King as co-author, who is mainly responsible for the strong interest in cages in the Southeast and the East.

ORDER FROM
Reader Service Department
FEEDSTUFFS
P.O. Box 67
Minneapolis 1, Minn.

DECLARE WAR ON WORMS . . .

with

Worm O Lass

a palatable, potent CATTLE & SHEEP WORMER

● **SELL IT TO YOUR CUSTOMERS** Now, you can offer your customers a really palatable wormer feed that contains enough Phenothiazine to rid cattle and sheep of stomach worms, hookworms, and nodular worms in one feeding. Worm O Lass ends the need for dosing or drenching individual animals and does the job at lower cost. There's a big, profitable, waiting market for Worm O Lass.

● **MIX IT IN YOUR FEEDS** Worm O Lass makes it easy for you to make palatable feeds containing low levels of Phenothiazine. Cattle and sheep really like Worm O Lass—yet it contains 8.8% of potent Phenothiazine of extremely small particle size for extra worm-killing power. Just a small amount of Worm O Lass added to your concentrates will provide a prophylactic level of Phenothiazine that will effectively control worms.

IT'S RED HOT!

Vy Lactos LABORATORIES, INC.
1901 East Euclid Avenue
Des Moines 13, Iowa

Vy LACTOS LABORATORIES, INC.
1901 East Euclid Avenue
Des Moines 13, Iowa

Please send me complete details and prices on Worm O Lass.

Name .....
Company .....
Street .....
City ..... State.....

IODIDES ★★ IODATES

All Potassium IODIDE Mixtures

- Potassium Iodate & Iodide
- Calcium Iodate
- Cuprous Iodide

DEEP WATER BRAND
LOWEST COST — HIGHEST STABILITY

Chemical Manufacturing Co., Inc., of CALIFORNIA
714 W. Olympic Blvd., Los Angeles 15, Cal.

☆ Classified Ads ☆

Classified advertisements accepted until Wednesday each week for the issue of the following Saturday.
Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies.

Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.
All Want Ads cash with order.

HELP WANTED

QUALIFIED NUTRITIONIST. WRITE EXperience and complete information. Address Ad No. 2038, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

MANUFACTURER'S REPRESENTAtive or broker salesman now calling on the feed trade to sell nationally advertised mineral feeds. Several exclusive territories open. Address Ad No. 1800, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

A MAN FAMILIAR WITH ANIMAL FEEDing and capable of calling on feed manufacturers, selling a line of chemical feed additives, also familiar with the sale of industrial chemicals. Address Ad No. 2013, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

A GOLD MINE FOR SIDELINE SALESmen—If you call on feed dealers and veterinarian suppliers you can sell Virid. This is the sensational new natural base vitamin-mineral supplement for horses. Used extensively by race horse owners and breeders. Nationally advertised. Liberal commission and exclusive territory. Write to A. Ferrara, Virid Distributing Co., 410 W. Lake St., Minneapolis, Minn.

HELP WANTED

LOOKING FOR SALES ADMINISTRATIVE opportunity? Large feed manufacturer Midwest location, needs man with feed sales background and experience. This company is sound and growing. It is a real opportunity for the right man. Address Ad No. 2069, P. O. Box 67, Minneapolis 1, Minn.

EASTERN FEED MANUFACTURER OFfers excellent opportunity for qualified sales personnel in northeastern areas. Men between ages 20 and 35 years with agricultural background and education advantage. Car furnished. Incentive program. Openings available now. Address Ad No. 2068, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

EXPERIENCED FEED PRODUCTION SUperintendent for large established mill, eastern Pennsylvania. Must be able to take complete charge of mill personnel and supervise production of complete line of formula feeds. Give personal resume when replying. Address Ad No. 2043, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

HELP WANTED

SALESMAN WANTED—MAN CALLING ON feed dealers and elevators to carry nationally advertised sideline. Good repeat item. A few good established territories now open. Reply to: Sales Manager, P. O. Box 5078, Minneapolis, Minn.

ESTABLISHED BROKERAGE FIRM HAS opening for salesman, 25 to 35 years old, experienced in animal and vegetable protein meals. Good opportunity. Packing House By-Products Co., 100 N. La Salle St., Chicago 2, Ill.

NUTRITIONIST

Long established Eastern Feed Manufacturer desires assistant to Director of Nutrition Department. Present Director will be retiring in a maximum of three years. Applicant must have experience in formulation and experimental work, plus a college degree. Address Ad. No. 2029, Feedstuffs, P.O. Box 67, Minneapolis 1, Minnesota.

DISTRIBUTORS WANTED

Manufacturer seeks distributors for fast selling, new, poultry and hog wormer in bulk packing. All territories. Address Ad. No. 2053, Feedstuffs, Suite 3214, 551 Fifth Avenue, New York 17, New York.

SALES MANAGER
VITAMIN FEED SUPPLEMENTS

Rapidly increasing business requires experienced man to head and expand sales program, including dealer relationships, preparation of technical literature, etc. Location: Rochester, New York. Excellent employee benefits.

Distillation Products Industries
Division Eastman Kodak Company
P. O. Box 3
Rochester, New York

DISTRICT SALES MANAGER

National vitamin manufacturer of highest reputation has opening for District Sales Manager. Must have experience in sales to feed industry and knowledge of nutrition and feed formulation. Excellent opportunity for right man. Liberal compensation and incentive plan. Send complete details in first letter. Replies will be held confidential. All members of our sales department have knowledge of this ad. Address Ad. No. 2064, Feedstuffs, P.O. Box 67, Minneapolis 1, Minn.

ADVERTISING MANAGER

Formula Feeds. Our growing Feed Division needs an Advertising Manager. He should be a young man with substantial knowledge of advertising, as well as experience with livestock and poultry. An excellent opportunity for an outstanding man. Write giving full information on education, experience and personal history, or stop at our office.

INTERNATIONAL MILLING CO.
1200 Investors Bldg. Minneapolis 2, Minn.

SALES MANAGER

"A Challenge"

This is a tough job. The rewards are great. But, don't apply unless you are a hard-boiled manager who can drive a sales organization to make calls and get business. Also, you must have ability to show new men how to sell. Our product is well-known—backed with strong advertising, research, customer profit records. Our prices match competition. If you have sold feed fertilizer, or similar products, you will have an advantage here. Will pay 5 figure salary and bonus which should make your annual earnings $20,000 or more within 2 years. Write (in confidence) fully about yourself, and your sales management experience. Enclose photo.

Address Ad No. 2058, Feedstuffs, P.O. Box 67, Minneapolis 1, Minn.

ADVERTISING ASSISTANT

We need an energetic copywriter with enthusiasm and imagination to work as an advertising assistant. He should be able to organize and develop campaigns, handle his own budget and work with outside contacts. This position is in the Agricultural Advertising Department of a world wide manufacturer located in Metropolitan New York. Please write us about yourself and indicate salary desired. Address Ad. No. 2066, Feedstuffs, P.O. Box 67, Minneapolis 1, Minn.

more
advertisers use
FEEDSTUFFS
than any other
publication in
the feed industry

BUSINESS OPPORTUNITIES

FOR SALE OR LEASE—FEED MILL, includes hammer mill, feed mixer, grain cleaners, also large storage space, electric power. William R. Lauster, Box 14, Yatesboro, Pa.

When you want to Buy or Sell
ELEVATORS or
FEED MILLS
See or Write Us Your Needs
We Have Some Good Ones in
OHIO-INDIANA-
ILLINOIS
MID-WEST BUSINESS EXCHANGE
Halbert C. Smith Plymouth, Ind.

MACHINERY FOR SALE

WRITE HUGHES ENGINEERING CO., Wayland, Mich., when you need electric and feed and flour mill machinery.

ONE NO. 10 SHANZER DRYER FOR sale, automatic controls. Wood Grain Co., Moville, Iowa.

ONE ANTHONY BURR CRUMBLIZER with 5 H.P. motor. Sabetha Machinery Co., Sabetha, Kansas.

ONE REBUILT STANDARD DUTY 50 H.P. California Pellet Mill. Sabetha Machinery Co., Sabetha, Kansas.

CHAMPION MOBILE GRINDER AND MIXer units. Champion Portable Mill Co., 2105 Como Ave. S.E., Minneapolis 14, Minn.

WHIRLAWAY AIRBLAST CAR LOADERS. J. B. Hagan Mill Machinery, Jefferson City, Mo.

FEED MIXER, 1-TON CAPACITY, GUARanteed first-class throughout, 5 H.P. motor drive. Ad No. 2074, Feedstuffs, Minneapolis 1, Minn.

WHEN YOU ARE IN THE MARKET FOR new or used mill machinery, electric motors or any other equipment, write J. B. Hagan Mill Machinery, Jefferson City, Mo.

SEWING MACHINE, UNION SPECIAL Style 21800-P with 14500 head and 12" belt conveyor. Ray Jones, 2222 Oakview Drive, Jefferson City, Mo.

TWO TURBINES; TWO MIDGET MARVEL Mills. Large and small hammer mills. Attrition mills. Diesel engines and corn shellers. C. L. Smith, Leola, Pa.

PARTS FOR SPROUT-WALDRON ACE Pellet Mill, ⅝" die, ¼" die and miscellaneous parts. Will sell cheap. Address Ad No. 2014, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

FOR SALE—DEHYDRATING ALFALFA plant, with or without rolling stock, located in the heart of irrigation district in Nebraska. Address Ad No. 2070, Feedstuffs P. O. Box 67, Minneapolis 1, Minn.

3 UX JAY BEE MILL AND FAN—FULLY rebuilt 50 H.P. motor. Dust collector, elbow starter. Excellent condition. This machinery must go. Phone Fireside 5-2225, H. C. Shelton, Farmington, Ky.

FOR SALE—FOX FIELD HARVESTER, with Jones 7-foot cutter bar, Ford ind. engine. All 90% new condition, $1,750. W. A. Caplis, Jr., Box 1312, Shreveport, Louisiana.

BAUER ATTRITION MILL WITH TWO 10 H.P. motors, compensator and new grinding disks about 24" diameter. Best offer. State Manufacturing Co., Inc., 3545 E. 76th Street, Cleveland, Ohio.

FOR SALE—ENCLOSED MOTORS, RICHardson Scales, truck scales, hammermills, oat crimpers, horizontal and upright feed mixers, sewing machines, elevator legs, screw conveyors, molasses mixers and pellet mills. J. B. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

FOR SALE—SPROUT-WALDRON 336 CU. Ft. (12,000 lb.) horizontal ribbon dry mixers; S-W type 3036 swing head blender with 50 H.P. motor; 4'x30', 6'x30', and 6'x50' rotary steam tube dryers; 3'x24', 4'6"x40', 5'6"x30' rotary hot air dryers. Hammermills, pulverizers, attrition mills, etc. Perry, 1403 North 6th Street, Philadelphia 22, Pa.

ATTENTION FEED MILLS — HERE IS the opportunity to get set up for that fall demand of pelleted feeds at low cost. FOR SALE: One used Master Model California Pellet Mill, serial No. 62610, with direct drive enclosed 30 H.P., mounted on mill and starter; one California Cooler and one California Shaker Unit, both complete with motors. Also one oil-burning 10 H.P. vertical boiler with automatic controls. To be sold as a complete unit, subject to prior sale. Write or call for appointment. Big Gain Products, West Union, Iowa.

MACHINERY WANTED

ONE DOUBLE STAND OF 9x30 BALL OR roller bearing rolls with extra pair rolls. Address: Dietrich & Gambrill, Inc., Frederick, Md.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. B. Hagan Mill Machinery, Jefferson City, Mo.

DRYERS, DEHYDRATORS, HOT AIR 5x40 or larger. Hammermills 75 H.P. up. Vertical mixers and conveyors. Immediate action. Address Ad No. 2046, Feedstuffs, Suite 3214, 551 Fifth Ave., New York 17, N. Y.

SITUATIONS WANTED

SALES POSITION DESIRED BY DIRECtor of nutritional research who wishes to specialize in sales work. Experienced in direct and dealer merchandising, selling and servicing large accounts, sales training, sales promotion, consumer meeting. Excellent sales personality, accomplished speaker. Proven record of success in research and sales. Address Ad No. 2063, Feedstuffs, P. O. Box 67, Minneapolis 1, Minn.

BABY CHICKS FOR SALE

BABY CHICKS—AS HATCHED OR SEXED —Five popular breeds and one hybrid. Quality - Quantity - Service. Wholesale prices. Milford Hatchery, Liberty Road, Randallstown, Md.

John R. Cooper

NEW COMMANDER — John R. Cooper, executive vice president, O. A. Cooper Co., Humboldt, Neb., feed and flour milling firm, has been elected commander of the American Legion of the Department of Nebraska. Mr. Cooper, who is director of research for his company, is a member of the Nutrition Council of the American Feed Mfrs. Assn. He is active in industry and civic affairs, and is currently first vice president of the Nebraska Grain Improvement Assn. Among his current civic activities is chairmanship of the Richardson county chapter of the Polio Foundation and of the Selective Service Board.

G. Cullen Thomas Is New FDA Consultant

WASHINGTON—The appointment of G. Cullen Thomas, Minneapolis, as a special consultant of the Food & Drug Administration has been announced by George P. Larrick, FDA commissioner.

Mr. Thomas has retired after 26 years as a vice president of General Mills, Inc. He served as chairman of a recent Citizens Advisory Committee which studied and reported on the activities of the Food & Drug Administration.

Mr. Larrick said, "We are glad to secure the services of a man who has such a broad knowledge of our organization and of the law which it administers. His advice will be sought on a wide variety of questions and problems, but we believe he will be especially helpful to us in the area of industry cooperation and education. We wish to further develop this phase of our work in a way which will enlist the help of the great majority of business men who want our food and drug laws to be truly effective."

Mr. Thomas secured his A.B. degree from Butler University in 1913, where he served as athletic director from 1913-18. He also worked as a chemist for the State of Indiana from 1910-17.

In 1920 he became production manager of the Atlas Bread Co. of Milwaukee. From there he went to the Washburn Crosby Co. of Minneapolis, which later was merged as a unit of General Mills.

WHO SAYS:
"OF LITTLE OR NO NUTRITIONAL VALUE?"
Properly supplemented, Dehydrated Corn Cob Meal has a feeding value for cattle of 62% of grain corn! Do we need to reappraise the true value of this low-cost cattle feed? Write for Paxco Fax Bulletin 569-1 today.
PAXTON PROCESSING CO., INC.
P. O. Box No. 120 Paxton, Illinois

HIGHER QUALITY HEAT TREATED HAMMERS
Hammers direct from manufacturer of years' experience. Send your specifications or worn hammer. Quantity discounts on hammers and screens. Ask for prices.
SOUTHWEST MILL SUPPLY CO.
P. O. Box 7455 N. Kansas City, Mo.

Standard steel elevators, belt and bucket type, available from stock. Ten Heavy Duty sizes, from 300 to 10,000 Bu/Hr., for continuous service and four Light Duty sizes, from 110 to 750 Bu/Hr., for intermittent service. We also manufacture screw conveyors and hoppers. Send your requirements for complete information.
GODSHALK
Sheet Metal Fabricators
BANGOR, PA.

Bryant
SEE OUR AD ON PAGE 26
DOUBLE DUTY
HAMMERMILLS

Chicago Feed Club Outing Draws 180

CHICAGO — With 110 members and guests playing golf, and more than 180 attending the dinner, the fall outing of the Chicago Feed Club, held at the Olympia Fields Country Club here Sept. 18, was one of the best attended outings in the history of the club.

Top golfer of the day was Dean Butts, Marblehead Lime Co., who shot a low gross of 76 over a tough course. He was awarded the President's Cup, and also the third low net prize. Other top prize winning golfers were Donald Rauch, Union Bag Co., with a first low net; Leo J. Knapp, Calcium Carbonate Co., second low net; Henry S. French, Feedstuffs, fourth low net, and Emig G. Schmidt, Chas. Pfizer & Co., Inc., fifth low net.

The first armchair prize went to Norman Stanton, Taste Engineering, Inc., and the first blind bogey winner was B. J. Free, Badger By-Products Co., Inc., Milwaukee, Wis.

Presiding at the dinner was R. C. Becker, Cereal Byproducts Co., president of the club. M. A. Jurgens, Illinois Farm Supply Co., chairman of the golf committee, supervised the awarding of prizes, and N. G. Anderson, Bay State Milling Co., figured the handicaps by the long Peoria system.

The next meeting of the club will be held at the Lake Shore Club Oct. 19. Officers to run the club for the year ahead will be elected.

Yieldmor Poultry Clinic Planned

PIQUA, OHIO—The annual broiler and poultry management and disease control clinic of Yieldmor Feeds, Inc., has been scheduled for Oct. 4 in Piqua.

Among the speakers will be Dr. Glyde Marsh, Ohio State University, speaking on "Controlling Mortality in Laying Flocks"; Bruce R. Davisson, Ohio Poultry Improvement Assn., on "Poultry in Ohio"; W. S. Thompson, Ohio feed control official, on "Controlling New Developments in Feed," and Dr. Roger Donnelson, Yieldmor Laboratory Service, on "What Broiler Growers Should Know About Respiratory Diseases."

A broiler and poultry management clinic and a disease control clinic are also planned for the day-long program.

Hold Sales Meeting

DES MOINES, IOWA—A two-day conference of the sales and plant personnel of VyLactos Laboratories, Inc., Des Moines, was held recently at the company's offices. Introduced at the meeting were two new products—Worm O Lass, a phenothiazine wormer feed for cattle and sheep, and an improved vitamin and antibiotic fortification for use in poultry drinking water, known as My-T-Mix Poultry Pusher. Sales and advertising plans for 1957 were presented by Dean F. Foster, sales manager.

ATTRACTIVE FRONT—Pictured here is the Mitchell Seed & Grain Company's headquarters at Roswell, N.M. Ervin Mitchell, the owner, is a firm believer in all types of advertising and uses the front of his plant to display a large sign. The retail store entrance is prominently marked. The business is approaching a $400,000 a year gross.

New Mexico Dealer Believes In 4-Point Plan for Building Feed, Related Product Sales

By Jess Blair

A 2,000% increase in sales during a 20-year period is considered rather steady progress for a feed company. The Mitchell Seed & Grain Co., Roswell, N.M., has done this, despite a searing drouth that has decimated livestock numbers in the southeastern part of New Mexico during the last five years. According to the owner, Ervin Mitchell, the area has many more feed stores of all sizes than there were several years ago.

For the last few years the business has grossed a quarter of a million dollars, and now is edging close to the $400,000 mark. This kind of business takes careful management and Mr. Mitchell says that's the main ingredient in operating any successful business.

The Mitchell Seed & Grain Co. is guided by four main principles. They are clever and effective advertising, keeping the right kind of equipment, reducing credit to a minimum and getting a quick turnover of merchandise.

In advertising, Mr. Mitchell thinks his most effective means is a radio broadcast given three times a week. It is beamed over a 5,000-watt station with a radius of 300 miles. Most of the time he does the talking and carefully works out the broadcast ahead of time.

He has learned that people like to hear the names of their acquaintances, so he tries to mention 20 names at every 15-minute broadcast. On the morning after the local livestock auction sale he lists several sales; for example, Sam Smith bought 15 steers to put on his maize field, or some else bought a bull and is still looking for two more.

He also uses the broadcast as a messenger service. When he installed a new automatic roller mill, he de-

STRONGEST MAGNET IN ITS CLASS

● GIVES GREATER PULL FOR THE MONEY
● GUARANTEED FOREVER

W-W PERMANENT MAGNETIC SEPARATOR
FOR FEED TABLE AND SPOUT INSTALLATIONS

You get more for your money with W-W Permanent Magnetic Separators. There's 30% more pull through the Alnico V unit than any other comparable magnet. W-W's "Fair Price" Policy assures true value whether you are a machinery manufacturer, dealer, contractor or user. The W-W Magnet has a protective casing to prevent breaking and to keep out dirt. Available hinged or plain in a wide range of sizes.

WRITE FOR W-W's FAIR PRICE POLICIES
SHIPMENTS MADE WITHIN 48 HOURS AFTER RECEIPT OF ORDER

W-W GRINDER CORP.
Dept. 311 Wichita, Kansas

• Interested in Water-Dispersible Vitamin Mixes . . . Piperazine . . . etc.?

Specifide Specialties

Include many fine Chemicals . . . Feed Additives . . . Vitamins . . . Antibiotics . . .

Under Specifide's Label, or your own Private Label

Such as:

- **Water Dispersible Vitamins/Antibiotic Mixes**
- **Antibiotics**
- **Arsanilic Compounds**
- **Piperazine (For Feeds or Drinking Water)**
- **Various Multiple Vitamin Mixes**

Tell us what you're interested in . . . Let us give you our experienced advice, and prices.

Specifide, Inc.

Farmaceuticals

P. O. Box 5305 • Indianapolis, Ind.

BUY and SELL through WANT ADS

scribed it over the air and told farmers to come in and see how it worked. As a result he got several visitors and the mill got a head start on paying itself out.

Another time he told about having a shipment of a certain insecticide in $1.50 bottles. Within a few hours he had sold 36 of them. He describes new merchandise, tells of conversations with the county agent or livestock experts and entomologists. Whenever a customer visits the store from quite a distance, this fact is mentioned.

Mr. Mitchell has also learned that a mistake attracts attention. One morning he mentioned a breed of cattle but got a physical characteristic wrong. Within an hour phone calls and visitors at the store swamped him, with everyone "ribbing" him about the error.

Other forms of advertising include newspaper and direct mail. During the seed selling season, he sends cards to all potential customers. Occasionally he gets out a store newspaper filled with farm facts, descriptions of merchandise and some humorous anecdotes. Mr. Mitchell has done a lot of writing and has a laconic type of humor that makes the paper extremely interesting.

The second principle, that of keeping the most modern equipment, enables him to put out quantity merchandise quickly and with the least amount of labor.

"We can mix any formula with our equipment," Mr. Mitchell says. "We make our own feeds and we duplicate the rancher's or feeder's own special mix. Likewise we mix feed for poultrymen, dairymen and other livestock owners. The only thing we don't mix is pet foods, but we do handle leading brands in all popular sizes."

Check on Credit

Keeping a rein on credit might seem a minor thing in some sections of the country. Because of the drouth many farmers and ranchers have no money and little credit, so the business owner must be both firm and tactful in refusing to sell on credit.

Mr. Mitchell has kept this down by giving a cash discount on most purchases. It ranges from 2-3%, so most customers make a special effort to get this saving by paying cash.

"Some of these fellows would pay up on time," Mr. Mitchell says. "But I have another reason for not tying my money up in accounts. I have never had to borrow money and because of this I've never had to dump a lot of merchandise at cut-rate prices in order to obtain operating capital."

Mr. Mitchell believes in handling a wide variety of merchandise and calls his store the store with a million items. Yet he does not buy in large quantity. Quite often two-thirds of the goods will be sold in two or three weeks time.

New Lines Added

The feed business has about held its own the last few years, but with only a third to a half as many animals in the country as five years ago, he saw other lines must be stressed.

One new field has been in farm chemicals. The sale of minerals used in fertilizers and pesticides alone has jumped from five bags a year to five tons. Fertilizers and pesticides have been increasing steadily, as well as weed killers, garden tools and small hardware.

Another money-making sideline has been in the sale of seeds. Mr. Mitchell handles certified seeds in maize, cane, grass, June corn, millet and hegari, and ships them throughout the Southwest and occasionally to other parts of the nation.

At present the plant includes an office and display room, storage rooms and about 17,000 sq. ft. of floor space in two warehouses. He can store 27,000 bu. of grain at one time.

Ordinarily Mr. Mitchell keeps seven employees, some of whom have been with him many years. His secretary has been with the firm a quarter of a century.

The Mitchell firm does not deliver. The trucks are used only for handling the store's goods. If a customer cannot carry whatever he buys, Mr. Mitchell hires a truck for it, after making an agreement with the customer. He says customers live at such varying distances from town that it is more profitable to adopt a no-delivery plan.

Another First From Hayes & Stolz

H S ELECTRIC DISTRIBUTOR

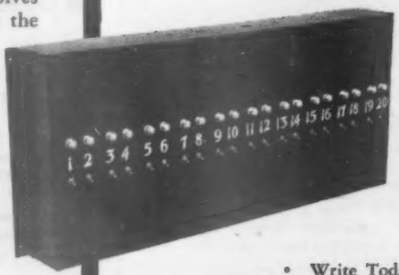
Custom-Built In 5 to 20 Openings With 6", 7", 8", 9", 10" and 12" Diameters

Do you ever wonder if your distributor is set on the right bin? the new *foolproof* Hayes & Stolz Electric Distributor removes this doubt by signalling your loading position accurately at all times. The loading position itself can be changed by a numbered switch on the control panel, assuring positive selection.

Heart of this revolutionary H & S Electric Distributor is a spout of ¼" steel at main wearing points which revolves inside the stationary distributor head. A tiny light on the control panel indicates the position of the spout at all times. The control panel is rigged with a special safety device which prevents the operator from confusing the machine if two or more switches are pressed at the same time.

The distributor is recommended for any free flowing solids such as are used in the manufacture of mixed feeds, grain, fertilizer, and cement. The machine is adaptable for mounting on elevator legs, collectors, under bins, sifters, mixers, screw conveyors, and belt conveyors.

The entire assembly is engineered with extreme care and is fully backed by a full Hayes & Stolz warranty.



Remote Control From Anywhere In Your Plant

In additional to the master control panel, there are extra Monitor panels available. The panels are identical to the master control panel, except that they are without switches. These monitor panels can be placed anywhere in the plant, and allow another person to check the setting position any time he likes.

• Write Today For Complete Information

Hayes & Stolz INDUSTRIAL MANUFACTURING CO., INC.

P. O. BOX 953, SOUTHSIDE STA., FORT WORTH, TEXAS

MINERAL FEEDS

(Continued from page 8)

Harry G. Hoffman, Hoffman & York Advertising, Milwaukee, said in previous years more emphasis has been placed on production than on selling, and a continuation of this trend can lead to difficulty. When production outruns the nation's ability to move goods into consumer channels, a depression occurs, he said. He believes that more study should be given to selling, insisting that knowledge about selling has not been arranged in an orderly manner. Nothing happens, he said, until the cash register rings.

During his "A Look Into the Future" address, Dr. W. N. McMillen, Staley Mfg. Co., Decatur, Ill., said that things are happening so fast that "the future is now." The future is now, he said, since events of today paint a picture of what can be expected in the future.

There are four basic trends in the feed industry, he said:

1. Population increase means greater consumption.

2. Larger and more specialized feeder projects on larger farms.

3. A big supply of farm grown feedstuffs.

4. Feeds will be more complicated.

Dr. McMillen foresees more feed additives and more scientific feeding. And, in this vein, the feeder right now is a very confused fellow, largely because of conflicting claims and competing products crying for attention. To dispel this confusion, and survive in his own right, he believes a feed manufacturer and dealer must rely on service and economies to the feeder. Feed firms will become more involved in helping the feeder secure better stock. Feeders must learn better management and develop herdsmanship and flockmanship.

A social hour and annual banquet closed the program for Sept. 20.

Swine Nutrition

"New Developments in Swine Nutrition" were discussed by Dr. Damon Catron, Iowa State College, Ames, to open the program the morning of Sept. 21. In his preliminary remarks, Dr. Catron urged that promotion effort be concerned with facts, declaring that farmers and feeders should be better informed and educated. During his recent tour of Europe, Dr. Catron said his experiences indicate that there is a big export market for corn and other American products in that part of the world, and all the U.S. needs is some trade agreements to dispose of our surplus. While Europe is trailing the U.S. in feed technology, he said, it surpasses us in herdsmanship.

He said American hog producers are in the horse and buggy days as compared to Denmark in housing and equipment for hog raising, and our one- and two-litter a year system is antiquated. He maintains nutritionists know more about hog raising than can be applied here because of poor management, poor housing and other grower factors. Three developments, he said, await progress of growers before they can be applied. He lists these as silage feeding of sows, early weaning of pigs, and the least-cost ration principle.

Joe M. Bohlen and George M. Beal, Iowa State College, Ames, Iowa, next gave a presentation on how farmers get new ideas. There are several stages of acceptance, they said, including awareness, interest, evaluation, trial and adoption. The source of the first awareness of ideas comes in the following order: Mass media, government agencies, neighbors or friends and salesmen.

Final speaker was V. B. Hamilton, Farmers Hybrid Hog Co., Hampton, Iowa, who talked of new breeding methods for maximum growth rate and meat-type hogs. Hybrid vigor in hogs, he said, is equal to that in corn. In addition to explaining the technical aspects of hybridization, he listed several factors which have a bearing on raising good hogs. Some of them are: Breeding, management and housing, freeness from disease and parasites, proper feed, marketing at proper weight, multiple farrowing.

PIG CROP

(Continued from page 1)

this connection, it may be noted that swine production in some sections outside the traditional Corn Belt area has been growing in importance, and most of the recent decline in hog raising has come in the main hog states. Some southern sections have shown little or no decrease.

The September survey on numbers of sows farrowing in the fall period in the nine Corn Belt states indicates an increase of 1%, or 28,000 head, over the farrowing intentions reported in June.

Farmers in all of the nine states report smaller fall sow numbers than for 1955, but there is variation among states in percentage decreases. The decreases from 1955 range from 17% in Kansas to 3% in Indiana.

Sows farrowed during the June-August period in the nine states totaled 1,889,000 head—down 9% from 1955 and 1% below the intentions reported for these states in June. These litters represent 54% of the estimated fall total, compared with 55% in 1955.

Sows bred to farrow in September, October and November are now estimated at 1,601 000 head, which is 6% below a year earlier but 3% above intentions reported in June.

Thus, it may be seen, most of the fall decrease is accounted for in the first part of the six-month period, and farmers responded to prevailing conditions by raising their sights from previous intentions for the latter part of the period.

1957 Intentions

Looking further ahead, reported breeding intentions indicate that the number of sows to farrow from December, 1956 through February, 1957, in the nine Corn Belt states will total 1,531,000 head. This would represent a 4% decline from a year earlier. USDA notes that the intentions reports show considerable variations among states, ranging from a 10% reduction in Ohio to a 4% increase in Illinois.

Other information in the special pig crop report shows that the number of all hogs and pigs on farms Sept. 1, 1956, in the nine states totaled 44 873 000 head, down 11% from a year earlier. Hogs and pigs six months old or over totaled 7 997 000 head, 12% less than a year earlier. The number under six months of age was 11% less than last September, with the sharpest drop occurring in the three-to-six-months age group—a decline of 13% for this group, compared with a 6% drop in the number of pigs under three months.

The decline in number of pigs under three months of age was 3 percentage points less than the decline in number of sows farrowing in the June 1-Sept. 1 period, reflecting an increase in number of pigs saved per litter.

The 13 074,000 pigs under three months old on farms Sept. 1 made up 29.1% of all hogs. Those three to six months of age totaled 23,802,000 head.

HOG TRENDS

(Continued from page 1)

the December-February period of the spring pig crop season there will be about a 4% reduction in farrowings from a year earlier.

However, USDA officials believe that this indicated 4% decline for the first half of the spring pig crop period will be erased as figures on farrowings in the latter half of the period are entered in the records. Then, as noted above, it would be about nip and tuck anywhere between a very slight decrease or slight increase in the size of the 1957 spring crop as compared with 1956.

Better Feed Efficiency

USDA officials said that the previous great emphasis on the hog-corn price ratio should be at least considerably modified in forecasting hog production. They assert that the new nutritional developments in hog feeding are an important factor in watering down strict adherence to the corn-hog price ratio.

According to officials, too little consideration has been given to the marked improvement in feeding efficiency with better feeds or to more efficient management among the better producers.

It seems reasonable to conclude from the conversations with USDA livestock specialists that they sense a bottoming of hog production this winter and that the upturn in the production cycle is not far off. It may be pinpointed in the next pig crop report.

Big Feed Supply

Confirming these forecasts are some economic data which they do not discard. One is the large potential supply of feed grains—corn in particular—and the indicated heavy supply of oilseed meal.

The final factor in the indicated beginning of the hog production upswing will be that of prices during peak fall marketings. If, as now is indicated, USDA will not let hog prices slump badly, a bottom of $14 50 hogs will be the assurance that farmers with large supplies of grain will likely expand hog production and the spring pig crop of 1957 may mark the turn of the production cycle.

SOYBEANS

(Continued from page 1)

The CCC board of directors earlier this week failed to adopt this proposal but, after further consideration, postponed a final determination. Following that meeting, informed sources told this reporter that next week an announcement would be forthcoming saying that USDA would not sell any of its take-over of beans from the 1956 crop at loan maturity at less than the loan price plus carrying charges.

Regarded as Strong Support

Trade comment reaching here this week did not see this statement as bullish. However, with many forecasters sensing an official crop estimate of not less than 475 million bushels, the indicated USDA pricing policy on soybeans is nothing less than a strong and undeniable support for beans at the recent market prices.

The present administration has been aiming at price stability for feed grains at this time, and the forthcoming announcement is certainly a stop-loss level for soybean producers.

In any event, USDA now is about to take a strong position in regard to re-sale prices of beans. In so doing, they put an assurance to the processing industry that it can safely buy beans in the open market now and not be faced with the USDA's selling beans later this crop year at a bid basis for either domestic sale or export.

This news may not be bullish, but it forecasts a safeguard against any great slump in bean prices.

R. W. Fredrickson O. K. Fredrickson

BROTHERS PROMOTED — Strong-Scott Mfg. Co., Minneapolis, has promoted Robert W. and O. K. Fredrickson, brothers, to executive sales posts in its grain processing equipment division. Robert W. Fredrickson will take over as manager of field sales. His brother will become contractor sales manager. Appointments were announced by L. S. Strong, president.

MOLASSES

(Continued from page 1)

Several factors have contributed to the bullish situation:

1. A shortage of tank cars. Mill buyers indicate carlot shipments are running as much as three weeks late, causing them to go out and buy truck lots at a premium. Several distributors reported they were far in arrears on tank car shipments, and the situation was beyond their control.

2. Shortage of supplies. The Cuban crop this year, while of fair proportions, failed to meet the large demand for molasses in U.S. cattle feeding areas, particularly in the drouth-stricken regions. The demand for high-molasses feeds for cattle has exceeded the trade's expectations. Heavy bookings of molasses were made earlier in the season, leaving a general scarcity of offerings at the present time.

On the other hand, several points leave mill buyers with the hope that an end to the recent run-up in prices is in sight:

1. The Louisiana domestic crop is due on the market soon, and

2. At the 20¢ gal. level, the relative energy cost value of molasses has exceeded that of corn. Some mills are considering increasing the corn portion of certain formulas to cut down on molasses requirements.

* *

No Sharp Rise Noted

NEW YORK—A generally bullish picture was indicated for the molasses market here, but there appeared to have been no sharp advance in prices.

Trade sources noted that there have been advances of ½¢ gal. every couple of weeks recently, and they attributed the strength to increased demand, tight supplies and increased freight rates. However, no further sharp advances were indicated this week.

One supplier said that its price was not raised this week, and molasses was quoted at 18¢ gal., New York.

Sows Farrowed and to Farrow

State	Tot. (June 1-Dec. 1) 1955	1956	Chg.	Fall sows June 1-Sept. 1 1955	1956	Chg.	Sept. 1-Dec. 1 1955	1956	Chg.	Dec. 1-March 1 Intentions 1955	1956	Chg.
	thousands		%	thousands		%	thousands		%	thousands		%
Minnesota	339	308	91	202	180	89	137	128	93	124	117	94
Ohio	350	326	93	176	168	95	174	158	91	157	142	90
Indiana	521	505	97	337	317	94	184	188	102	282	265	94
Illinois	687	653	95	346	335	97	341	318	93	280	291	104
Wisconsin	205	176	86	111	95	86	94	81	86	91	88	97
Iowa	1,039	935	90	581	505	87	458	430	94	391	380	97
Missouri	459	431	94	228	212	93	231	219	95	190	181	95
So. Dakota	85	76	90	49	42	86	36	34	94	25	24	96
Kansas	96	80	83	42	35	83	54	45	83	47	43	91
Total nine states	3,781	3,490	92	2,072	1,889	91	1,709	1,601	94	1,587	1,531	96

THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A AND D FEEDING OIL

Denver: Demand fair; supply ample; trend unchanged; 2,250 A, 350 D 21¢ lb.

New York: Trend steady; price per lb. in 55 gal. drums (413 to 420 lb.): 300 ICU, 750 A 13⅛@15⅛¢, 1,500 A 15⅛@17¢, 2,250 A 17⅛@20¢, 3,000 A 19⅛@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19⅛¢, 3,000 A 20@20⅛¢; f.o.b. Massachusetts, New York or Pennsylvania.

Seattle: Demand slow; trend steady; supply good; 300 D, 2,250 A 22¢ lb., 300 D, 1,500 A 19¢ lb., 300 D, 750 A 17¢ lb., all ex-warehouse, drums included.

Minneapolis: 10,000 A 33¢ lb.; 300 D, 2,250 A 20¢ lb.; 300 D, 1,500 A 18¢ lb.; 300 D, 750 A 16¢ lb.

Chicago: Demand fair; supply plentiful; straight A feeding oil, with 10,000 units vitamin A per gram 7⅛@9¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

Boston: Demand slow; supply good; 600 D, 1,500 A 17¢ lb.; 300 D, 2,250 A 18¢; 300 D, 1,500 A 16¢; 300 D, 750 A 15¢.

ALFALFA MEAL

Portland: Demand slow; supply ample; trend unchanged to higher; 15% suncured, Idaho $44, delivered Portland; 15% suncured, California $45, f.o.b. California; dehydrated $52, f.o.b. California.

New Orleans: Demand good; trend higher; supply adequate; dehydrated, 17%, vitamin A guaranteed $56@59; non-guaranteed $55@56; 15% $52@53; pelleted $2 less.

St. Louis: Demand good; trend higher; supply limited; dehydrated, 17%, 100,000 A $59.65 ton; suncured No. 1 fine ground, 13% $48 ton, f.o.b. St. Louis.

Chicago: Demand fair; supply tight; 17% dehydrated, with 100,000 units vitamin A guaranteed $57@57.50.

Minneapolis: The market was steady to stronger, with the undertone firm. Quotations: 17% dehydrated, 100,000 units of vitamin A guaranteed $59.50@59.75, granules and oil treated $58.50@58.75, bulk; 18% dehydrated, 125,000 units of vitamin A guaranteed $62.75; granules and oil treated $61.75, bulk.

Omaha: Demand strong; supply limited; 17% dehydrated, 100,000 A, papers or burlap $55; 20% dehydrated, 150,000 A, papers or burlap $57.50.

Seattle: Demand slow; trend steady; supply good; 16% protein suncured $45 ton, 136,000 A unit dehydrated $61 ton, both delivered, carlots.

Memphis: Demand fair; trend steady; supply adequate; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $47.

Kansas City: Market sharply stronger with blenders' prices controlling the market trend and few if any independents in this area making any offerings; only production left in a modest amount out of the Platte Valley in Nebraska, thus the Omaha market is slightly better than here, all blenders are at $55, sacked, Kanssa City, for 17% dehydrated alfalfa meal with 100,000 units vitamin A guaranteed on arrival, on p.d.a. only; trend is toward a $2 ton increase for next week's shipment; bulk pellets very firm and scarce at $54, bulk, Kansas City; suncured meal also strong due to drouth demand; No. 1 fine ground suncured $44@45, sacked, Kansas City, with trend higher; No. 1 ⅛-in. meal $42@42.50, sacked, Kansas City.

Denver: Demand good; trend stronger; supply ample; 100,000 A, 17% $48.

Philadelphia: Demand dull; supply fair; 17% dehydrated $59.50.

Ft. Worth: Demand good; supply limited; Nebraska-Kansas origin dehydrated, 17% protein, 100,000 A $63, delivered Ft. Worth; suncured No. 1 13% protein, ¼-in. grind $49.25, scattered October.

Los Angeles: Demand good; trend steady; supply limited; 15% suncured $38; 17% dehydrated $47@48.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $59@15@61.15.

Buffalo: Demand and supply fair; trend higher; $68, sacked, Boston.

Boston: Demand spotty; supply adequate; dehydrated, 17% $59; suncured, 13% $60.25.

ALFALFA PELLETS

Denver: Demand good; trend stronger; supply ample; 100,000 A, 17% $51.

Omaha: Demand strong; supply limited; 17% dehydrated, 100,000 A, bulk, October, November and December shipments $55.

ANIMAL FATS (STABILIZED)

Ft. Worth: Demand good; supply sufficient; prime tallow, tank cars 7¼¢ lb.; drums 8¾¢, f.o.b. north Texas packing plants, with returnable drums.

Los Angeles: Demand fair; trend steady; supply ample; bleachable fancy tallow 7¢; yellow grease 6¼¢.

Louisville: Demand fair; trend steady to strong; supply normal; bleachable white 7⅛@7¾¢ lb.; white tallow 7⅛@8¢; yellow 6⅝@6¾¢ lb.

Kansas City: Demand fair to good; offerings adequate; prime tallow 7⅜¢ lb., bleachable fancy 7¾¢ lb.

Chicago: Demand fair; supply good; bleachable fancy tallow, tank truck or carlots 7⅜¢ lb.; yellow grease 6¼¢.

San Francisco: Demand fair; supply ample; bleachable fancy 7¾¢ lb.; yellow grease 6⅝¢ lb.

Denver: Demand fair to good; trend steady; supply ample; 6⅞¢.

BARLEY FEED

Milwaukee: Demand good; supply fair; needles $1@1.10; ground $17.

Ogden: Supply normal; rolled $50@55; whole barley $43@48.

Chicago: Demand good; supply light; $42.

Baltimore: Demand good; supply light; $51.50.

Seattle: Demand fair; trend firm; supply good; whole barley $59 ton, ground barley $59 ton, rolled barley $60 ton, all ex-warehouse, l.c.l., sacked.

Los Angeles: Demand good; trend steady; supply ample; standard rolled $3.23; standard ground $3.19.

Boston: Demand fair; supply adequate; Canadian $47.

Portland: Demand good; supply ample; trend unchanged; rolled $59, ground $57.

San Francisco: Demand fair; supply ample; rolled $61, ground $60.

New Orleans: Demand fair; trend steady; supply light; pulverized $51@53.

Philadelphia: Demand dull; supply fair; pulverized $48.

BENTONITE (SODIUM)

Denver: Demand slow; trend steady; supply ample; 200 mesh $26.50 ton, f.o.b. Denver warehouse.

Chicago: Demand very good; supply adequate; f.o.b. Wyoming and South Dakota shipping points: granular, 30 mesh $15.50; fine granular, 80-100 mesh $12.75; powder, 200 mesh $12.50; f.o.b. Belle Fourche, S.D., minimum, 30-ton carlot: 80 granular $12.50, 200 mesh fine $12.25.

BLOOD FLOUR

Louisville: Demand fair; trend steady; supply normal; $87.50@90 ton.

BLOOD MEAL

Chicago: Demand fair; supply adequate; $110@125, guaranteed 80% protein.

Cincinnati: Demand fair; trend steady to strong; supply tight; $120.

Los Angeles: Demand fair; trend steady; supply ample; $4.50 a unit of ammonia.

Portland: Demand slow; supply ample; trend unchanged; $95.

Seattle: Demand slow; trend easy; supply fair; $80 ton, ex-warehouse, truck lots.

Louisville: Demand fair; trend firm; supply normal; $87.50@90 ton.

Ogden: Supply normal; $107.50 ton in 100-lb. bags, f.o.b. Ogden.

San Francisco: Demand slow; supply ample; $5 a unit of ammonia.

New Orleans: Demand fair; supply adequate; trend stronger; $80@82.50.

BONE MEAL (STEAMED)

Portland: Demand slow; supply ample; trend unchanged; import $90.

San Francisco: Demand good; supply ample; $82.50.

Buffalo: Demand good; trend higher; supply ample; $80 ton, sacked.

New Orleans: Demand slow; supply ample; trend steady; $85@90.

Omaha: Demand strong; supply limited; $90.

Seattle: Demand and trend steady; supply good; $85 ton, ex-dock, truck lots.

Louisville: Demand fair; trend strong; supply normal; $85@90.

Denver: Demand fair; trend unchanged; supply ample; $77.50, f.o.b. West Coast.

St. Louis: Demand good; trend higher; supply adequate; $90@95 ton, sacked.

Chicago: Demand improving; supply tightening; $77.50@85.

Cincinnati: Demand good; trend strong; supply short; $105 ton, sacked, f.o.b. Cincinnati.

Los Angeles: Demand fair; trend steady; supply ample; domestic $89.50.

Ft. Worth: Demand fair; supply adequate; $85, sacked, f.o.b. Ft. Worth, local manufacture.

Boston: Demand and supply steady; $80.

BREWERS DRIED GRAINS

Los Angeles: Demand fair; trend steady; supply ample; f.o.b. Van Nuys $48 bulk, $54 sacked.

Ft. Worth: Demand fair; offerings scarce; 25% $58@59, delivered Ft. Worth, October.

Cincinnati: Demand poor; trend higher; supply somewhat limited; $54.50@55.

Milwaukee: Demand good; supply fair; $50, Milwaukee.

Louisville: Demand good; trend steady; supply fair; $50 ton.

Boston: Demand active; supply irregular; 26% $53.75, bulk; Canadian 22% $57, sacked.

St. Louis: Demand good; trend higher; supply ample; $42 ton bulk, $47 ton sacked.

Philadelphia: Demand dull; supply light; $59.

Buffalo: Demand and supply fair; trend higher; $55, bulk, Boston.

New Orleans: Demand fair; trend steady to higher; supply light; $49@52.

Chicago: Demand good; supply light; 26% $51@52.

BREWERS DRIED YEAST

Portland: Demand slow; supply ample; trend unchanged; 13¢.

San Francisco: Demand fair; supply good; 10¢ lb.

Omaha: Demand good; supply adequate; 11¢ lb.

Louisville: Demand fair; trend firm; supply normal; 10¢ lb.

Pittsburgh: Carlots 10¢ lb., 5-ton lots 11¢; ton lots 11½¢.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢; ton lots 11½¢.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

St. Louis: Demand fair; supply adequate; 10¢ lb. in carlots; 10½¢ lb. in 5-ton lots; 11¢ lb. in ton lots; 11½@12¢ lb. in less than ton lots.

Milwaukee: Demand good; supply limited; 10½@11½¢ lb. in carlots; 10¾@12½¢ lb., l.c.l.

Buffalo: Demand good; trend steady; supply limited; $10.65 cwt.

Denver: Demand fair; trend unchanged; supply ample; $11 cwt.

Boston: Demand and supply steady; 11¢ lb.

Los Angeles: Demand good; trend steady; supply adequate; 9¢.

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10¼@12½¢ l.c.l.

BUTTERMILK-CONDENSED

Portland: Demand slow; supply ample; trend unchanged; $4.75.

Philadelphia: Demand slow; supply fair; $4.25, barrels.

San Francisco: Demand fair; supply good; $5 cwt.

New Orleans: Demand slow; supply ample; trend steady; $4.25@4.75 cwt.

Chicago: Demand fair; supply adequate; $3.25@3.50 cwt. in carlots.

Ogden: Supply average; $4.90, 100-lb. drum.

Los Angeles: Demand fair; trend steady; supply ample; 100-lb. drum $5.50, large barrels $4.75.

Boston: Demand fair; supply light; $3.75 cwt.

Louisville: Demand slow; trend steady; supply normal; $4.25 cwt.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $13.97, flour $9.72.
Buffalo: Crystals $14.74, flour $10.47.
Toledo: Crystals $16.39, flour $12.14.
Boston: Crystals $15.18, flour $10.93.
Limecrest, N.J.: Crystals $9.75, flour $5.50.

CALCIUM CARBONATE

Los Angeles: Demand fair; trend steady; supply ample; meal and flour $10.53 ton, carloads; grits $13.03 ton, carloads.

Seattle: Demand and trend steady; supply good; $14 ton, ex-warehouse, truck lots.

Minneapolis: Plain $11; iodized (⅛ lb. KI per ton) $14.45; iodized manganesed $15.90, in 100-lb. bags.

Chicago: Plain $8.90 ton in 100-lb. bags, delivered.

Cincinnati: Demand fair; trend steady; supply adequate; $8@9.

CHARCOAL

Chicago: Demand quiet; supply limited; poultry charcoal $102 ton in 50-lb. multiwalls.

Boston: Demand and supply light; $95.

Los Angeles: Demand slow; supply ample; trend steady; poultry charcoal, oak $3.34, 40-lb. bags, in ton lots.

San Francisco: Demand steady; supply ample; $54.50.

COCONUT MEAL

San Francisco: Demand fair; supply ample; solvent $63, expeller $69.

Portland: Demand limited; trend firm; supply limited; $74.

Seattle: Demand slow; trend steady; supply limited; $72 ton, ex-dock, 30-day arrival.

Los Angeles: Demand slacking; trend steady; supply ample; cake, ex-dock, October $63@64.

COD LIVER OIL (FORTIFIED)

Boston: Demand slow; supply good; 600 D, 2,250 A 22¢ lb.; 300 D, 2,250 A 21¢; 300 D, 1,500 A 18½¢.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14⅛@15⅛¢, 1,500 A 16⅛@19¢, 2,250 A 18⅛@21¢, 3,000 A 21⅛@23¢; 600 ICU, 1,500 A 18@19⅛¢, 2,250 A 20@23¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

New York: Demand good; trend steady; supply limited; 4@4½¢ lb., f.o.b. eastern shore.

Los Angeles: Demand good; trend steady; supply limited; 4¢.

Boston: Demand good; supply adequate; 3¾@4¢ lb.

New Orleans: Demand good; supply limited; trend stronger; $80@82.

CORN GERM MEAL

St. Louis: Demand slow; trend steady; supply adequate; $43 ton bulk, $48 ton in burlap sacks, St. Louis.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $49.08, meal $71.08.
Atlanta: Feed $58.69, meal $80.49.
Birmingham: Feed $56.74, meal $78.74.
Boston: Feed $55.61, meal $77.60.
Chicago: Feed $45, meal $67.
Cleveland: Feed $52.31, meal $74.31.
Denver: Feed $54.37, meal $76.37.
Ft. Worth: Feed $52.93, meal $74.93.
Indianapolis: Feed $49.74, meal $71.74.
Kansas City: Feed $45, meal $67.
Louisville: Feed $49.30, meal $71.39.
New Orleans: Feed $54.27, meal $76.27.
New York: Feed $55.20, meal $77.20.
Norfalk: Feed $54.37, meal $76.37.
Philadelphia: Feed $54.78, meal $76.78.
Pittsburgh: Feed $52.93, meal $74.73.
St. Louis: Feed $45, meal $67.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $50@50.75.

New Orleans: Demand fair; trend steady; supply adequate; $53@53.75.

Louisville: Demand slow; trend firm; supply normal; $53.10 ton.

COTTONSEED OIL MEAL

New Orleans: Demand fair; trend steady; supply ample; 41% old process $60@64.

Wichita: Demand slow; supply sufficient; 41% $64.

San Francisco: Demand good; supply ample; expeller $70, solvent $67.50.

Portland: Demand slow; supply ample; trend unchanged; $65, f.o.b. Los Angeles.

Buffalo: Demand poor; trend steady to higher; supply adequate; $71.50, sacked, Boston.

Cincinnati: Demand fair; trend steady to easier; supply adequate; solvent $61.15 @62.15; old process $65.15@66.15.

Denver: Demand fair; trend slightly stronger; supply ample; $66.

Omaha: Demand fair; supply adequate; 41% solvent $67.

Philadelphia: Demand and supply fair; $67.

Chicago: Demand fair; supply increasing; hydraulic $64; solvent $60@61.

Boston: Demand slow; supply good; $71.50@72.

Ft. Worth: Demand excellent; offerings limited for October shipment; carlots, 41% old process $65, f.o.b. central Texas mills; solvent, 41% low gossypol $61, delivered Ft. Worth; pellets $2 additional; cottonseed hulls $28, delivered Ft. Worth.

Ogden: Supply average; 41% $63@73.

Los Angeles: Demand and trend steady; supply ample; $64.

Seattle: Demand fair; trend steady; supply good; $78 ton, delivered, carlots, 41% expeller process.

Louisville: Demand fair; trend steady; supply normal; old process $61 ton; new process $62 ton.

Atlanta: Demand fair; trend strong; supply ample; 41% $58.50, sacked, immediate.

Memphis: Demand slow; trend steady; supply ample; prime 41% protein, old process $55; new process, 41% solvent $52.50.

Kansas City: Market tight with demand good and offerings limited due to slow output at present time; also some export interest has sparked prices; old process $56.50 @57, sacked, Memphis; solvent $52.50@53, sacked, Memphis.

D ACTIVATED ANIMAL STEROL, POWDERED

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢; 3,000 ICU 18¢, warehouse.

New York: Trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

Kansas City: Demand fair; trend steady; supply adequate; 10⅛@11¢ lb.

D ACTIVATED PLANT STEROL, POWDERED

Chicago: Demand good; supply adequate; 4,000,000 U.S.P. units per lb., 16¢ lb.; ton lots and less 17¢; 12,000,000 units per lb., 5 tons to a carload 28¢ lb.; ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: $49.50.
Houston: 19% $69.50.
Wales, Tenn.: $64.10.
Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17% $58 net ton, f.o.b. Coronet in 100-lb. multiwall bags, $55 in bulk.

DICALCIUM PHOSPHATE

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $89.06 ton, delivered; $3 ton less in bulk.

Trenton, Mich.: Minimum phosphorus 21%, maximum fluorine .01% guaranteed $90.30, f.o.b. Trenton, in 100-lb. multiwall bags; minimum phosphorus 18¼%, maximum fluorine .01% guaranteed $79.55, f.o.b. Trenton in 100-lb. multiwall bags.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $79.55 ton, f.o.b. Columbia, in 100-lb. multiwall bags. Freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Chicago: Demand fair; supplies adequate; stock food grade, 18.5% phosphorus, 20,000 lb. or more $79.55 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn., less than 20,000 lb. $89.55; 21% phosphorus, 20,000 lb. or more $90.30, basis Chicago Heights and Nashville, less than 20,000 lb. $100.30; freight equalized with St. Louis, Trenton, Mich., and Godwin, Tenn.; bulk boxcars or hoppers, $3 net ton less than bagged material.

Bonnie, Fla.: Demand improving; supply adequate; minimum phosphorus 18½%, granular $79.55; freight equalized with closest dicalcium phosphate producing point, carload basis.

Cincinnati: 18% phosphorus $88@89.

Denver: Demand fair; trend unchanged; supply ample; $83.50, f.o.b. plant, St. Louis.

Portland: Demand slow; supply ample; trend unchanged; $100.

INERT GAS STORAGE
FOR RENT TO OWNERS OF
DEHYDRATED ALFALFA
Feed Manufacturers Alfalfa Producers Dehydrators
Jobbers Feeders
PELLETING AND RE-GRINDING SERVICE FOR STORAGE CUSTOMERS
LABORATORY ANALYSES GUARANTEED IDEAL LOCATIONS
Write for full particulars
GRAIN ELEVATOR WAREHOUSE CO.
1070 Board of Trade Building Kansas City 5, Missouri

DISTILLERS DRIED GRAINS

San Francisco: Demand fair; supply ample; $57.50, solubles $80.

Louisville: Demand good; trend steady; supply light; production increasing; a number of distillers that have been down over the summer are now operating or will operate soon; bourbon grains, light $56.50, dark $57.50, solubles $77.

Buffalo: Demand good; trend steady; supply poor; $62, bulk, Boston.

Cincinnati: Demand fair; trend steady to strong; supply very limited; $62@64.

Boston: Demand active; supply tight; dark $63.75 bulk, $66 sacked; light $63.75.

Philadelphia: Demand dull; supply very light; dark $69.

DRIED BEET PULP

San Francisco: Demand good; supply fair; $50.

New Orleans: Demand fair; trend easier; supply adequate; $63@65.

Ft. Worth: Demand slow; supply moderate; carlots, 50-lb. papers $55@56, delivered Ft. Worth, October shipment.

Atlanta: Demand slow; trend steady; supply ample; $71.35, sacked, immediate.

Seattle: Demand fair; trend steady; supply sufficient; $56 ton, delivered, carlots.

Cincinnati: Demand fair; trend steady; supply adequate; $62@65.

Buffalo: Demand fair; supply poor; no quotations.

Minneapolis: Market unchanged at $45, Red River Valley points.

Los Angeles: Demand good; trend steady; supply ample; $54.50, paper bags.

Ogden: Supply normal; $45@50 ton.

Milwaukee: Demand and supply fair; molasses $57, plain $58.

DRIED BUTTERMILK

Los Angeles: Demand fair; trend steady; supply ample; 11¢.

Boston: Demand and supply fair; 11¢ lb.

Ogden: Supply average; $7.25, 100-lb. bag.

Buffalo: Demand good; trend easier; supply ample; $9.25 cwt.

Milwaukee: Demand fair; supply fair; $10.75.

Louisville: Demand light; trend firm, supply normal; 9@9¼¢ lb.

Minneapolis: Market unchanged at $8.50 @9 cwt.

New Orleans: Demand slow; trend steady to firm; supply adequate; $9.25@9.50 cwt.

Chicago: Demand slow; supply fair; medium acid $8.25@8.75; sweet cream $8.75 @9.25.

Wichita: Demand slow; supply adequate; $8.25 cwt.

San Francisco: Demand fair; supply ample; 11¢ lb.

Ft. Worth: Demand very slow; supply light; local production $12 cwt., f.o.b. Ft. Worth.

Landby Dehydrating Co.
Manufacturers of Dehydrated Alfalfa Meal
Established 1948
A. J. Landby, Warroad, Manager
Office Phone 27 Res. Phone 153
Mill at Swift, Minn.

DRIED CITRUS PULP

Boston: Demand light; supply adequate; $56.43.

Buffalo: Demand poor; trend steady; supply fair; $36, sacked, f.o.b. Florida points.

Atlanta: Demand fair; supplies ample; trend steady; pulp $43, meal $38, sacked, immediate.

Los Angeles: Demand active; supply limited; trend steady; f.o.b. southern California producers' plants: orange $45 sacked, $40 bulk.

San Francisco: Demand good; supply fair; meal $50.

New Orleans: Demand good; trend steady; supply limited; $43@45.

DRIED SKIM MILK

Milwaukee: Demand and supply fair; $11.75.

Boston: Demand poor; supply fair; 11 @12¢ lb.

Buffalo: Demand good; trend steady; supply ample; $11.50 cwt.

Minneapolis: Market steady at $10.50@ 11 cwt.

Cincinnati: Demand fair; trend steady; supply adequate; 11@12¢.

Los Angeles: Demand fair; trend steady; supply ample; $13.75.

Louisville: Demand fair; trend firm; supply normal; 11½@12¢ lb.

Philadelphia: Demand slow; supply fair; $11.50.

New Orleans: Demand slow; supply ample; trend steady; $12@12.50 cwt.

San Francisco: Demand and supply fair; 13½¢ lb.

Portland: Demand slow; supply ample; trend unchanged; 12½¢.

Chicago: Demand light; supply adequate; $10.50@11 cwt. in carlots.

DRIED WHEY

Philadelphia: Demand slow; supply fair; $4 cwt.

San Francisco: Demand steady; supply good; $8 cwt.

Portland: Demand slow; supply ample; trend unchanged; $4.95.

New Orleans: Demand poor; trend steady; supply adequate; $6@6.25 cwt.

Chicago: Demand steady; supply adequate; $5.20 cwt. in carlots.

Los Angeles: Demand fair; trend steady; supply ample; $5.45, plants; $6, f.o.b. Los Angeles warehouse.

Ogden: Supply normal; $6.90, 100-lb. bag.

Ft. Worth: Demand fair; supply adequate; carlots, standard $6 cwt., sacked, delivered Ft. Worth or any Texas point or in ton lots, f.o.b. warehouse Ft. Worth.

Buffalo: Demand poor; trend steady; supply fair; $6 cwt., delivered.

Cincinnati: Demand fair; trend steady; supply adequate; $5.25 cwt.

Denver: Demand slow; trend unchanged; supply ample; $7 cwt.; $6 carlots.

Boston: Demand poor; supply plentiful; $5.60 cwt.

Minneapolis: Market steady at $5@ 5.25 cwt.

Louisville: Demand good; trend steady; supply ample; 6@6¼¢ lb.

Seattle: Demand and trend steady; supply good; $6.50 cwt., ex-warehouse, l.c.l.

Kansas City: Demand fair; trend steady; supply moderate; straight grade $6 cwt., delivered or $5 cwt., f.o.b. plant plus freight to destination, whichever is lower; partially delactosed $6.25.

FEATHER MEAL (HYDROLYZED)

Boston: Demand slow; supply good; $76, f.o.b. Maine shipping points.

FISH MEAL

New Orleans: Demand good; trend steady; supply limited, fishing poor account bad weather in Gulf; menhaden 60% $137; scrap $133, burlaps.

San Francisco: Demand fair; supply ample; $2.15 a unit of protein.

Chicago: Demand slow; supply adequate; menhaden fish meal, 60% protein, f.o.b. East Coast $135@137 ton; 60% blended West Coast $128; Northwest herring-salmon blend $128; herring meal, 73% protein $1.95 a unit of protein.

Cincinnati: Demand fair; trend steady; supply adequate; $150@155.

Buffalo: Demand good; trend higher; supply ample; 60% protein menhaden $146 ton bulk, $148 sacked.

Denver: Demand slow; trend unchanged; supply ample; $2 a unit, f.o.b. Seattle.

Portland: Demand slow; supply ample; trend unchanged; $2, f.o.b. Vancouver; $2.25, f.o.b. California.

Seattle: Demand slow; supply good; trend unchanged; $2 a unit protein, ex-dock, carlots.

Louisville: Demand fair; trend steady; supply ample; $150 ton.

Atlanta: Demand fair; trend strong; supply limited; 60% $149, sacked, immediate.

Minneapolis: Market steady; 70% herring meal $1.95 a unit of protein, West Coast; 60% meal $145, Minneapolis.

Ft. Worth: Demand fair; supply sufficient; 60% protein menhaden meal $139.50, menhaden scrap $134.50, f.o.b. Port Arthur; 65% protein Peruvian fish meal $143.50, f.o.b. Houston, first half October; 63% South African pilchard fullmeal with 10% dry solubles $145, f.o.b. Houston, due mid-October.

Ogden: Supply normal; $2.20 a unit, f.o.b. Coast; 65% $171@173.

Los Angeles: Demand slow; trend steady; supply moderate; $2 a unit of protein.

Boston: Demand and supply steady; $134 @136.

Milwaukee: Demand and supply fair; 60% $161.

HAY

Wichita: Demand slow; supply very light; prairie $24@30, alfalfa $30.

Portland: Demand slow; supply ample; trend unchanged; $35.

Philadelphia: Demand dull; supply fair; $28.

St. Louis: Demand fair; trend steady; supply ample; alfalfa, first and second cutting $12@14 ton; alfalfa, third cutting, green $16 ton; prairie $27@28 ton; timothy and clover mixed $27@28 ton.

New York: Demand and supply good; trend steady; No. 1 timothy $36@42 ton; No. 2 timothy $30@34 ton; No. 3 timothy $26@29 ton.

Louisville: Demand dull; trend weak; supply good; new alfalfa, No. 1 $25, No. 2 $21; old hay, clover, timothy and clover and timothy mixed, No. 1 $22, No. 2 $20; straw scarce and up to $18, due to heavy demand from highway contractors.

Seattle: Demand fair; trend steady; supply good; $35 ton, delivered, truck lots, U.S. No. 2 green.

Denver: Demand slow; trend steady; supply ample; third cutting alfalfa $26; mountain hay $34.

Los Angeles: Demand improved; trend steady; supply ample; U.S. No. 1 $26@28; U.S. No. 2, leafy $24@25; U.S. No. 2, green $24@25; U.S. No. 2 $22@23.

Boston: Demand spotty; supply adequate; No. 2 timothy $34@36.

Ft. Worth: Demand fair; light offerings; nominal, carlots, baled, Oklahoma and western origin, No. 1 alfalfa $46@48, No. 2 $44@46; Texas and Oklahoma origin, prairie, No. 2 $36@38; Johnson grass, No. 2 $34@36, delivered TCP.

Ogden: Demand steady; supply average; $1.10 bale; $21@24 ton in the barn.

HOMINY FEED

Boston: Demand slow; supply adequate; $59 bulk.

Milwaukee: Demand good; no offerings; $66, sacked, Milwaukee, nominal.

Chicago: Demand fair; supply light; $56 @56.50.

Seattle: Demand fair; trend easy; supply good; $66 ton, delivered, carlots, sacked.

Louisville: Demand fair; trend steady; supply ample; $59@61 ton.

Memphis: Demand nil; trend steady; supply ample; white $60.50, yellow $61.

Kansas City: Demand only fair; offerings moderate; trend about steady to slightly easier; $50.50@51, sacked, Kansas City.

Buffalo: Demand and supply fair; trend steady to lower; $60.50, bulk, Boston.

Cincinnati: Demand fair; trend steady; supply somewhat limited; $60@61.

New Orleans: Demand fair; trend higher; supply limited; $59@61.50.

LINSEED OIL MEAL

Minneapolis: Market somewhat easier, with demand fair and directions reported good. Quotations: $52@53, bulk, Minneapolis; 22% flaxseed screenings oil feed $32@ 33, bulk, Minneapolis.

Omaha: Demand fair; supply adequate; 34% expeller $77.50, pellets $80; 36% solvent $67, pellets $69.50.

New Orleans: Demand slow; trend steady to higher; supply ample; 32% or better $76@78.

Wichita: Demand fair; supply sufficient; 34% $72.50.

Denver: Demand poor; trend steady; supply ample; $75.

Seattle: Demand slow; trend steady; supply sufficient; $82 ton, delivered, carlots, 34% protein.

Louisville: Demand fair; trend steady; supply ample; old process $80.10; new process $76.16.

Kansas City: One strikebround plant is back in operation relieving the supply situation somewhat; demand fair to good; solvent $53@53.50, bulk, Minneapolis.

Cincinnati: Demand poor; trend steady; supply adequate; new process $69, old process $79.

San Francisco: Demand and supply fair; $74.

Philadelphia: Demand dull; supply fair; $73.50.

Chicago: Demand slow; supply adequate; solvent $62.50@63; expeller $72.50@73.

Milwaukee: Demand good; supply fair; old process $73.25, new process $62.75.

Los Angeles: Demand fair; trend steady; limited offers; $69.

Portland: Demand slow; supply ample; trend unchanged; $65, f.o.b. Los Angeles.

Ft. Worth: Demand slow; supply adequate; carlots, 34% or better, October-December $75.55, delivered Ft. Worth; pellets $2.50 premium.

Boston: Demand slow; supply ample; $78.

MALT SPROUTS

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $53.

Boston: Demand and supply nil; quotations withdrawn.

Milwaukee: Demand good; supply fair; oddweights $46, evenweights $47.50.

New Orleans: Demand slow; trend easier; supply adequate; No. 1 $40@42.

St. Louis: Demand good; trend higher; supply ample; No. 1 bulk $37 ton, No. 1 sacked $42 ton, No. 2 bulk $35 ton.

Chicago: Demand slow; supply adequate; No. 1 $45.50@46.

MEAT SCRAPS

Los Angeles: Demand good; trend steady; supply limited; $1.75 a unit of protein.

Cincinnati: Demand good; supply short; trend strong; 50% $92 ton, sacked, f.o.b. Cincinnati.

New York: Demand and supply good; trend strong; 50% $77.50, 55% $85 bulk; 50% $76, 55% $83.50 sacked.

Buffalo: Demand good; trend steady; supply ample; 50% meat scraps $87.50 ton, bulk; $90, sacked.

Louisville: Demand fair; trend firm; supply normal; $90@95 ton.

Seattle: Demand fair; trend steady; supply good; $75 ton, ex-warehouse, truck lots, 50% protein.

Kansas City: Trend strong due to light

FEED INGREDIENTS
Fish Meal • Scrap • Solubles
Bigelow Sales Company
Produce Exchange Building
2 Broadway NEW YORK 4, N. Y.
Tel HAnover 9-9195

For DEHYDRATED ALFALFA—
"MERRY MIXER" GREENULES
BETTER DISPERSION!
DUST-FREE! FREER FLOWING!
MORE UNIFORM!
CONSOLIDATED BLENDERS INC.
Fremont, Nebr. - Phone Park 1-9000
TRADE MARK

FEED GRAINS
KAFIR-MILO
BARLEY - CORN - OATS - WHEAT
From Every Grain Producing Area in United States
CONTINENTAL GRAIN COMPANY

OFFICES:

New York	Memphis	Fort Worth	San Francisco
Chicago	Norfolk	Buffalo	Vancouver, B.C.
Kansas City	Nashville	Toledo	Winnipeg
St. Louis	Enid	Houston	Los Angeles
Omaha	Minneapolis	Galveston	
Columbus	Louisville	Portland	

TERMINAL ELEVATORS:

Kansas City	Toledo	Galveston	Nashville
St. Louis	Columbus	Enid	Louisville
Chicago	Fort Worth	Minneapolis	Memphis
Buffalo	Portland	Norfolk	Houston
Omaha			

kill at this time and a fairly good demand; 50% meat and bone scraps $90@93, sacked, Kansas City.

Minneapolis: Market unchanged at $97, nominal, for 50% meat and bone scraps.

Ogden: Supply average; $92.50 ton in 100-lb. bags.

Boston: Demand active; supply adequate; $1.35 a protein unit; converted, 50% $80.

Portland: Demand slow; supply ample; trend unchanged; $1.50 a unit.

Ft. Worth: Demand good; supply moderate; meat and bone, 50% $82@84, f.o.b. or delivered Ft. Worth.

Denver: Demand good; trend steady; supply ample; $82.50, 50% protein.

Wichita: Demand good; supply insufficient; 50% $90, f.o.b. plant; 55%, no quotations, no offerings.

San Francisco: Demand fair; supply ample; $1.70 a unit of protein.

St. Louis: Demand good; trend higher; supply ample; 50% $93 ton bulk, $98 ton in paper sacks, $97 ton in burlap sacks.

Omaha: Demand strong; supply limited; $92.50.

New Orleans: Demand good; trend higher; supply adequate; $90@92.50.

Chicago: Demand improved; supply tightening; 50% protein $87.50@91; 55% $98.

MILLET

St. Louis: Demand slow; trend firm; supply scarce; recleaned Early Fortune $3.65 cwt., sacked; recleaned White Proso $3.85 cwt., sacked.

MILLFEED

Minneapolis: Market is moderately stronger, with demand sufficient to keep supplies moving. Quotations: bran $37@37.50, standard midds. $38@38.50, flour midds. $49@50, red dog $54@57.

Kansas City: Bran is holding fairly steady while better offerings of shorts and bulk middlings had eased prices somewhat; demand fair; bran $35@35.75, sacked, Kansas City; shorts $41@41.50, sacked, Kansas City; middlings $33.25@34, bulk, Kansas City.

Wichita: Demand improved for bran, steady for shorts; supply sufficient; basis Kansas City, Sept. 25: bran $35.25@35.75, shorts $41.75@42.25; prices on bran were about unchanged, while shorts declined $1 ton, compared with the previous week.

Denver: Demand fair; trend weaker; supply ample; bran $38.75, shorts $45.25, mill run $42.

Ft. Worth: Demand fair; supply of bran adequate, shorts sufficient; carlots, burlaps, prompt, wheat bran $42.50@43.50; gray shorts $50@51, delivered Texas common points; $1 lower on both bran and shorts compared with previous week.

Omaha: Demand fairly good; supply adequate; bran $35.75, shorts $41.50; standard midds., bulk $35.50.

Chicago: Millfeeds stayed near an even keel during the week ending Sept. 25, with demand and supply factors seemingly balancing each other. Trade was fairly quiet. It is believed that a pick-up in formula feed business will firm prices and possibly produce sizable advances. Quotations: bran $40.50@41, standard midds. $41.50@42, flour midds $55@56, red dog $59@60.

St. Louis: Demand slow; trend steady to easy; supplies heavy; bran $39.50@40, shorts $45.50@46, St. Louis switching limits.

Cincinnati: Demand fair; trend steady; supply adequate; bran $45@46, middlings $47@48.

Louisville: Demand fair; trend easy; supply normal; bran $46, mixed feed $49.50, shorts $51.75, middlings $49.25.

Buffalo: Millfeed sales held fairly steady. Prices were irregular. The cold snap stimulated demand for bran, which ended 50¢ higher. Middlings were down 50¢. Heavy feeds continued in demand, with prices up 50¢ to unchanged. Bran $43.50@44, standard midds. $45.50@46, flour midds. $60@62.50, red dog $61@62.50.

New York: Demand and supply good; trend upward; bran $50@51; standard midds. $52.50@53.

Boston: Demand cautious; supply adequate; bran, Canadian $51; domestic middlings $54@56.

Philadelphia: Demand fair; supply ample; bran $50, standard midds. $52, red dog $70.

New Orleans: Demand slow; trend steady to stronger, particularly on bran; supply adequate; bran $45@46.75, shorts $51@52.75.

Memphis: Demand poor; trend steady; supply ample; wheat bran $44, gray shorts $49, standard midds. $46.

Seattle: Demand slow; trend easy; supply good; $39 ton, delivered common transit points, carlots.

Ogden: Demand weaker; supply average or better; to Utah and Idaho: red bran and mill run $40, middlings $45; to Denver: red bran and mill run $47, middlings $52; to California: red bran and mill run $47.50, middlings $52.50, f.o.b. San Francisco and Los Angeles.

Portland: Demand slow; trend weak; supply ample; $38.

San Francisco: Demand fair; supply ample; $46.50; red bran $50.50.

Los Angeles: Demand limited; supply ample; trend steady; mill run, Utah-Idaho billing, sacked $46@47.50; red bran, delivered CCP, sacked $50@51.

MINERAL FEED

Denver: Demand fair; trend unchanged; supply ample; 7.5% phenothiazine, 45-lb. block $4.50; 8.2% phosphorus, 50-lb. block $3.50; 7.5% phenothiazine, 8.2% phosphorus, 45-lb. block $5.25; 5% phosphorus, 50-lb. block $2.65.

Ogden: Supply normal; $106.50 ton in 50-lb. blocks; $96.50 ton, granular, 50-lb. bags.

Seattle: Demand fair; trend steady; supply good; $44 ton for competitive brands, ex-warehouse; $65 ton for high phosphorus mixtures, ex-warehouse.

Sioux City: 50-lb. mineral blocks, 8.2% phosphorus $93; 7.5% phenothiazine sheep mineral blocks $4 each.

Ft. Worth: Demand fair; supply ample; all-purpose granules $87, block $93, mineral phosphorus 6% granules $104, block $108; cattle sheep mineral 7% phosphorus granules $96, block $100; hog mineral phosphorus 3½% granules $46, phosphorus 2% $75 (all in 50-lb. paper bags).

Wichita: Demand good; supply sufficient; all-purpose with iodine, 50-lb. blocks $95, 100-lb. bags $90, f.o.b. plant.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Portland: Demand slow; supply ample; trend unchanged; $42.

MOLASSES

Minneapolis: Offerings tightened up and prices generally advanced. Some was offered for last half October shipment in the 20@21¢ range, but forward commitments could be made only on a p.d.s. basis.

Atlanta: Citrus molasses—demand good; supply limited; trend strong; $20 ton, bulk, f.o.b. Florida producing points, immediate.

Louisville: Demand fair; trend stronger; supply normal; 18¢ gal., tank car lots, f.o.b. New Orleans.

Seattle: Demand and trend steady; supply good; $30 ton, f.o.b. Seattle, tank car lots.

Memphis: Demand fair; trend steady; supply ample; blackstrap 17¢ gal., tank car, f.o.b. New Orleans.

Kansas City: Market sharply stronger with rather heavy buying interest and offerings tightly held; also a lack of sufficient tank cars contributed to the trend; while some offerings held around 18¢ gal., New Orleans, these are generally nominal and latest actual trades have been as high as 20¼¢ gal. for immediate shipment, 1¢ premium for October, subject to confirmation.

San Francisco: Demand and supply good; $30 ton, f.o.b. cars Richmond, Cal.

New York: Demand and supply good; trend steady; blackstrap 18¢ gal., tank cars, tank wagons, f.o.b. New York.

Buffalo: Demand good; trend steady to higher; supply fair; 19¢ gal., f.o.b. Albany.

Cincinnati: Demand fair; trend higher; supply limited; 18@18½¢ gal., New Orleans.

Denver: Demand fair; trend stronger; supply ample; 18¢, f.o.b. New Orleans.

New Orleans: Demand good; trend firm; supply adequate; 17½¢ gal. in tank cars, f.o.b. New Orleans.

Los Angeles: Demand good; trend steady; supply ample; $30, f.o.b. tank cars; $30.25, f.o.b. tank trucks, both Los Angeles harbor.

Ft. Worth: Demand good; supply scarce; blackstrap 18½¢ gal., f.o.b. Houston; delivered Ft. Worth trucks $39.33; seller's market price on date of shipment.

Boston: Demand good; supply ample; 18¢ gal. in tank cars.

Milwaukee: Demand and supply fair; blackstrap 17½¢ gal., New Orleans.

NIACIN

New York: Trend steady; $8 kilo, 50-kilo lots; $8.10 kilo, 10-kilo lots; $8.20 kilo, 5- and 2½-kilo lots; $8.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Cincinnati: Demand fair; trend steady; supply adequate; reground oats $23; pulverized white oats $49; rolled oats $52.

Ft. Worth: Demand fair; supply sufficient; oat millfeed $52.80, reground oat millfeed $27.80.

Los Angeles: Demand fair; trend steady; supply ample; white pulverized $70.

Boston: Demand steady; supply adequate; white pulverized $49 for Canadian; domestic $54; ground mixed $43.75; reground oat feed $19.25.

Seattle: Demand slow; trend firm; supply good; whole oats $67 ton, ground oats $68 ton, rolled oats $71 ton, all ex-warehouse, l.c.l.

Minneapolis: Market about steady, with good demand for nearby or heavier products; deferred interest limited. Quotations: feeding rolled oats $85@87, standard pulverized $47@47.50, feeding oatmeal $72@74, crimped oats $61.50, reground oat feed $17@18.

Louisville: Demand fair; trend steady; supply normal; reground $22.75, rolled oats $90.75, feeding oatmeal $82.75; pulverized white oats $49.75, crimped white oats $72.75.

Memphis: Demand poor; trend lower; supply ample; 3½% protein, reground oat feed $21.50.

Portland: Demand slow; supply ample, trend unchanged; rolled $65, ground $62, cleaned $66.

St. Louis: Demand fair; trend steady; supply ample; reground oat feed $18.50 in 100-lb. burlap sacks; pulverized white oats $45 ton, choice $46.

Philadelphia: Demand dull; supplies fair to light; pulverized white oats $50.50; Canadian oat feed $22.50, domestic $22.

Chicago: Demand fair; supply adequate; reground oat feed $16; fine ground feeding oatmeal $78@80; feeding rolled oats $88@90.

New Orleans: Demand fair; supply adequate; trend stronger; steam crimped oats $76@78, pulverized white oats $54@56, mixed feed oats $44@46.

OYSTER SHELL

Cincinnati: Demand fair; trend steady; supply adequate; $21.75.

New Orleans: Demand fair; trend steady; supply adequate; $16@18 local origin.

Portland: Demand slow; supply ample; trend unchanged; western $30, eastern $36; crystal grits $26.50, granite grits $26.50.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Los Angeles: Demand and trend steady; supply ample; local $18.25, eastern $25.

Boston: Demand good; supply plentiful; $23.21 in paper.

Louisville: Demand good; trend steady; supply normal; in 80-lb. bags $21.34, 50's $21.54, 25's $21.84.

Seattle: Demand and trend steady; supply good; western shell $28 ton, eastern shell $32 ton, both ex-warehouse.

PEANUT OIL MEAL

Milwaukee: Demand and supply fair; 26% $45.

Atlanta: Demand slow; trend steady; supply limited; 45% $59, sacked, immediate.

PEAT MOSS

Los Angeles: Demand and trend steady; supply ample; Canadian, 6.1 cu. ft. bales $3.45 in 300-bale lots, delivered California main line points.

Boston: Demand and supply steady; $3@3.10 bale.

Chicago: Demand good; supply short, $3.75@3.85 standard 7½ cu. ft. bale.

Portland: Demand slow; supply ample; trend unchanged; $3.15.

Seattle: Demand and trend steady; supply good; $2.90 bale, delivered, carlots, horticultural or poultry.

New Orleans: Demand good; trend firm; supply light; standard bales German moss $3.75@3.85.

San Francisco: Demand fair; supply ample; $3.35 bale.

Philadelphia: Demand and supply fair; $2.95, f.o.b. pier.

POTASSIUM IODIDE, U.S.P.

New York: Trend steady; granular or crystals $1.80½ lb. in 250-lb. drums, $1.92 lb. in 100-lb. drums, $1.95 lb. in 25-lb. drums; 90% KI in calcium stearate or carbonate mixtures, $1.81 lb. in 250-lb. drums or 200-lb. lots, $1.83 lb. in 100-lb. drums, $1.86 lb. in 25-lb. drums; f.o.b. New York, New Jersey or Pennsylvania; freight allowed to destination on 100-lb. drums or larger packings.

St. Louis: Demand fair; trend steady; supply ample; 100% pure potassium, U.S.P., 250-lb. average in drums $1.90, 100-lb. lots in fiber drums $1.93; potassium iodide calcium stearate mixture, 225-lb. lots in leverpak drums $1.81, 100-lb. fiber drums $1.85.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gram in 3.63 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

RICE BY-PRODUCTS

San Francisco: Demand fair; supply ample; bran $42, polish $46.

New Orleans: Demand fair; supply limited; trend stronger; bran $45@46; no quotations on hulls.

Atlanta: Demand fair; trend strong; supply limited; bran $47.50, sacked, immediate.

Ft. Worth: Demand fair; supply moderate; carlots, rice bran $37@38, prompt shipment, f.o.b. south Texas rice mills; hulls $3@4, f.o.b. mills.

Los Angeles: Demand fair; trend steady; supply ample; bran $52, truck.

SCREENINGS

Minneapolis: Improved demand for light material and flax screenings was reported; receipts larger. Quotations: country run $12@18, lights $4@10, mediums $10@25, heavies $25@32; Canadian $10, bulk, Duluth; Canadian ground $20, sacked; flax screenings $15.

Buffalo: Demand and supply fair; trend steady to higher; ground, sacked $25, New York, L&R; unground, bulk $18.50, New York.

Cincinnati: Demand fair; trend steady; supply adequate; Canadian $22; barley $16@21.

New Orleans: Demand good; trend easier; supply light; 3/64-in. grind $35.20@37.

Denver: Demand fair; trend steady; supply ample; $32, flax screenings.

Chicago: Demand moderate; supply plentiful; ground grain screenings $24; Canadian, bulk $15.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $18.85@19.10.
Buffalo: $23.65@23.90.
Chicago: $23.10@23.35.
Cincinnati: $21.80@22.
Des Moines: $23.60@23.85.
Kansas City: $23.20@23.45.
Memphis: $20.50@20.70.
Minneapolis: $24.25@25.55.
Philadelphia: $22.65@22.90.
St. Louis: $22.50@22.75.
Tampa: $18@18.20.
Toronto: $27.50@27.80.

SORGHUMS

Cincinnati: Demand fair; trend steady; supply adequate; $2.75.

Los Angeles: Demand fair; trend steady; supply ample; No. 2 milo, delivered CCP, prompt $2.95.

Ft. Worth: Demand good; supply adequate; carlots, bulk, No. 2 yellow milo $2.35@2.37, delivered Texas common points.

SOYBEAN MILLFEED

Ft. Worth: Demand good; supply sufficient; $33, immediate; $35, October-November-December, delivered Ft. Worth.

SOYBEAN OIL MEAL

Portland: Demand slow; supply ample; trend unchanged; October $43; October-March $44.

Cincinnati: Demand fair; trend steady; supply adequate; $45.50@46, bulk, Decatur.

Denver: Demand fair; trend steady; supply ample; $69@70.

Wichita: Demand good; supply sufficient; 44% $64, 50% $72, f.o.b. Wichita.

Los Angeles: Demand improved; trend steady; supply ample; $79.25, delivered CCP.

Minneapolis: Prices are firmer, with October-December delivery now quoted up $1 ton at $43.50, bulk, Decatur; spot market at $45.50, same basis.

Milwaukee: Demand good; supply fair; $47, bulk, Decatur.

Boston: Demand slow; supply plentiful; $45, bulk, Decatur.

Ft. Worth: Demand good; supply extremely light for immediate shipment; carlots, 44% $70.50@71.50, prompt; last half October-November-December $68@69; truck loads $65, scattered first half October, delivered Ft. Worth.

Ogden: Supply average; $85@90.

Chicago: Demand for soybean oil meal picked up considerably during the week ending Sept. 26, and supplies for this and next week shipment are virtually sold out. There is some buying through October, but not much. Quotations: 44% soybean oil meal $57.50@58.

Seattle: Demand slow; trend firmer; supply good; $78 ton, delivered, sacked, October shipment.

Louisville: Demand fair; trend steady; supply normal; $57.60 ton.

Atlanta: Demand fair; trend steady; supply ample; 44% $64, sacked, immediate.

Memphis: Demand fair; trend steady; supply ample; prime 44% solvent $56.50, sacked, f.o.b. Memphis.

Kansas City: While the market has been at a fairly moderate level, new buying interest and a stronger trend in other commodities have led to stronger prices this week; for nearby shipment both Kansas City western shipments and unrestricted are offered at the same level, $47.50@48, bulk, Decatur; October around $46@46.50 for Kansas City and West.

Philadelphia: Demand fair; supply ample, $44.50, bulk, Decatur.

New Orleans: Demand poor; trend lower; supply adequate; 49% $69@69.50.

Omaha: Demand fair; supply adequate; 44% solvent $64.50; 41% expeller $71.50.

San Francisco: Demand fair; supply ample; $79.25.

Decatur: Demand good; supply tightening; 44% bulk, unrestricted $47.50@48.

SUNFLOWER SEED

St. Louis: Demand fair; trend steady; supply ample; large black $16 cwt., medium black $13.50 cwt., medium gray $13 cwt., small black and gray $10.50 cwt.

TANKAGE

St. Louis: Demand good; trend higher; supply ample; 60% $90 ton bulk, $95 ton in paper sacks, $94 ton in burlap sacks.

Cincinnati: Demand fair; trend steady; supply fair; 60% digester $35.

Minneapolis: Market about unchanged, with supplies affected by strike at a major

New England By-Products Corp.

177 MILK STREET Phone HUbbard 2-1682 BOSTON 9, MASS.

• Gorton's Al-Fish Blend Jr. • Gorton's Layer Blend
• Gorton's Mar-Vi-Tic Blend • Gorton's Turkey Blend
• Condensed Fish Solubles • Dried Potato Pulp
• Vitamin Oils • Fish Meal • Dried Beet Pulp
• Southern Sunshine Poultry Litter • Feather Meal
• Richpelt Ocean-Fresh Fish • Dried Cond. Fish Solubles
• Dried Citrus Pulp • Flavor Corporation of America
• Newbyco Vitalizer

DISTRIBUTED BY

H. MARK McNEAL CO.
1207 Liberty Life Bldg.
Charlotte 2, N. C.
Phone: Franklin 7-1522

CHARLES COOPER
P. O. Box 135
Doylestown, Penn.
Phone: Doylestown 4568

J. KENNETH BLACKSTONE
R. D. No. 1
Caribou, Maine
Phone: Caribou 2-0032

C. C. WELCH
435 Brevoort Road
Columbus, Ohio
Phone: Amherst 8-1077

L. J. BARRETT CO.
Box 505
Clinton, N. J.
Phone: Clinton 451

L. E. 'ROBBIE' ROBERTSON
P. O. Box 691
Binghamton, N. Y.
Phone: Binghamton 27152

HAWKINS MILLION $ HEN, INC.
Harrisonburg, Va.
Phone: Harrisonburg 4-3051

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Feed Ingredients of All Kinds
FORMULA MIXING FOR DEALERS
Excellent References

CANADIAN OATS

POULTRY
FEED
SEED
MIXED FEED
PROCESSED

ALL GRAINS & BY PRODUCTS

JAMES RICHARDSON & SONS LIMITED

ESTABLISHED 1857
14TH FLOOR, 2 KING ST. E., TORONTO
EMpire 4-8361
Head Office, Winnipeg, Canada

packing plant. Quotations: $94 for 60% digester, nominal.

New Orleans: Demand fair; trend firm; supply ample; 60% $97.50@100.

Kansas City: Demand good; offerings light; 60% digester $90@93, sacked, Kansas City.

Omaha: Demand strong; supply limited; $90.

Ft. Worth: Demand good; supply light; 60% digester $82@84, f.o.b. Ft. Worth.

Chicago: Demand improved; supply tightening; 60% protein $85@90.

WHEAT GERM MEAL

New Orleans: Demand fair; trend lower; supply plentiful; $80@82 cottons.

Buffalo: Demand fair; trend steady; supply poor; commercial grade $75, sacked, f.o.b. Buffalo.

Chicago: Market easier at $78 as supplies increased seasonally.

Soybean Meal Futures Decline at Memphis

MEMPHIS — Declines dominated the soybean oil meal futures market at Memphis during the week ending Sept. 26. Bulk cottonseed oil meal managed to finish with plus signs.

Unrestricted soybean oil meal trading was moderately active. The September option moved up with reduced production, scarcity of boxcars and activity by short interests. Eastern trunk line soybean oil meal was fairly active and steady. The nearby option went off without a sharp upturn. Cottonseed oil meal was quiet and steady.

Unrestricted soybean oil meal closed the week 25@75¢ ton lower. ETL soybean oil meal was the same as unrestricted. Bulk cottonseed oil meal was 25¢ ton lower to $1 ton higher, and sacked cottonseed oil meal was unchanged to 25¢ ton lower.

E. A. Dill Dies

BUFFALO—E. A. Dill, traffic manager and a director of Industrial Molasses Corp. since it was founded in 1940, died Sept. 17 after a brief illness. He was 53 years old.

He is survived by his wife and two children.

PET FOOD

(Continued from page 8)

create up-to-date, well-designed packages are bound to stand out in a dog food display, they added.

Since the dog food manufacturer is already spending money on packaging, the decision to redesign the package is not necessarily an expensive one, Mr. Nash said. The beginning of redesign is a strong trademark which can be adapted to any size box, carton, bottle, billboard, letterhead, advertising and TV screen. Design, not color, should produce the package's effectiveness because design, rather than color, is what people remember.

The most important factors in a design decision reportedly are brand identification, visibility of product, appetite appeal, display value, stocking facility, advertising value and cost. Seventy four percent of all manufacturers in a recent survey, said that a change in consumer packaging brought a measurable increase in sales, Mr. Nash stated.

A new design, in most cases, lasts only two to three years, Mr. Nash and Mr. Spencer pointed out. "Then sales begin to fall off and a new design is again needed to re-stimulate sales."

"In most cases the product itself doesn't change. But a new package lifts things up all along the line. First, there's a new 'record' for the salesman to play. He's tired of the old one, and it shows in his sales talk. His enthusiasm for the new design, his having a new talking point, helps to spread the enthusiasm to the dealer.

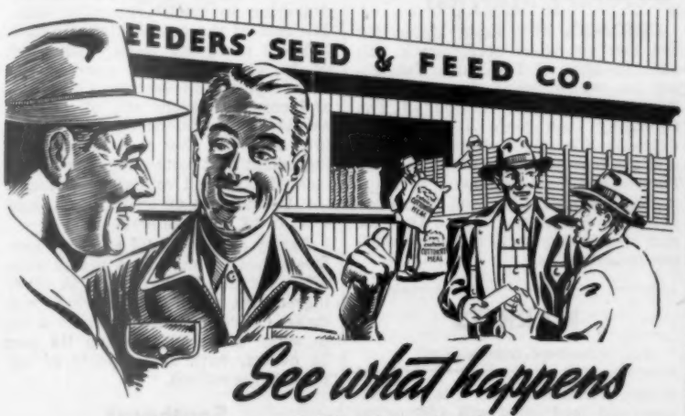
"Then, having a new theme, a new package to promote, it gives a lift to the advertising department and provides something for them to build a campaign around. Finally, consumers seem to think if there's a new package, there has to be an improved product inside. All this shows up in improved sales."

What about manufacturers who introduce a fine new package and don't get an upsurge in sales? Mr. Spencer said that package design changes should be made only after adequate research has provided sound knowledge of the market and how to sell it.

Mr. Nash and Mr. Spencer emphasized that manufacturers should from time to time check to see if their equipment is efficient. They said that an outside agency or specialist is in a position to recommend the best possible equipment, because the recommendations are least likely to be biased.

Cincinnati Feed Club To Meet

CINCINNATI — The Cincinnati Feed Club will resume its seasonal activities Oct. 1 with a dinner meeting at the Cincinnati Club, with Chairman A. J. MacGregor presiding. The speaker will be Dr. Jurgen H. Roetter, professor of history at the University of Cincinnati, who will discuss "The USSR in Historical Perspective." A cocktail hour will precede the dinner.



See what happens

. . . with Cottonseed Meal in Feed Formulas!

Feed manufacturers, dealers and customers all benefit from the economical, high-nutrient value cottonseed meal adds to feed formulas. These superior formulas at the lowest cost mean more volume and faster sales for the dealer and manufacturer and extra dividends to the feeder through increased production at less feeding cost. You, too, will see profits and volume rise when you use cottonseed meal in your feed formulas.

Educational Service

NATIONAL COTTONSEED PRODUCTS ASSOCIATION, INC.

618 WILSON BUILDING DALLAS 1, TEXAS

NITROFURAN

(Continued from page 4)

Dr. Harwood's paper, "The Efficacy of a Nitrofuran Mixture as an Avian Coccidiostat," is a report of research conducted by him and his associates, Dorothy I. Stunz and Robert W. Wolfgang.

A previous report had shown that furazolidone at low levels in the diet stimulated growth of chickens.

"Dr. Harwood and his associates became interested in the possibility that a mixture of nitrofurazone and furazolidone might overcome to a significant degree the weaknesses inherent in today's coccidiostats," the Hess & Clark announcement said. "After comparatively testing several formulas, the group determined that a mixture of .0055% nitrofurazone and .0008% furazolidone was the most promising for practical use in the control of coccidiosis in chickens. This mixture was then tested in several ways.

"When compared under experimental conditions involving extremely heavy artificial infections, the nitrofuran mixture proved superior to other coccidiostats in permitting rapid growth and improving feed conversion, but inferior in preventing deaths, when heavy artificial infection was introduced."

Extremely heavy experimental infections, it was noted, are usually produced by laboratory inoculation and are rare in nature, however. They yield information about performance of a drug under unusual conditions but do not reveal whether it may be fed profitably by the ordinary flock owner. Accordingly, the company said, the researchers attempted to determine whether the mixture could be fed profitably to every broiler flock and not just to the very few flocks that suffer an epidemic of unusual severity.

"To determine the comparative value of the nitrofuran mixture in ordinary poultry flocks under normal management conditions, several field trials were conducted in a large broiler area," Hess & Clark said. "In these trials no artificial infections were administered.

"The nitrofuran mixture proved superior under normal flock management conditions, reducing feed costs by as much as 4.26¢ per bird. Data from similar experiments in which the nitrofurans were compared with other coccidiostats under conditions of natural infections showed that the birds receiving the nitrofuran mixture cost less to raise."

ILLINOIS LAB

(Continued from page 7)

samples annually as compared to 3,000 previously. "This laboratory is of great importance to the farmer and to the feed and fertilizer dealers of our state," Mr. Stannard stated. "Since introduction of the various additives in livestock feeds and chemical fertilizers, modern laboratory equipment has become a necessity in making analyses."

It is expected that the new laboratory will be one of the best in the nation for this purpose.

An "open house" will be held at the laboratory from 10 a.m. to 4 p.m. C.S.T. A noon luncheon in the Junior Home Economics Bldg. will feature Gov. Stratton as the speaker.

NEW FIRM OPENS

ROCK CREEK, OHIO—The Rock Creek Feed Mill recently opened for business here in the buildings formerly occupied by the Farm Service Feed Mill. John Plemel, Trumbull, Ohio, is manager, and John Struhar, also of Trumbull, is foreman. The company offers custom grinding and mixing service and medications in addition to Pillsbury's formula feeds.

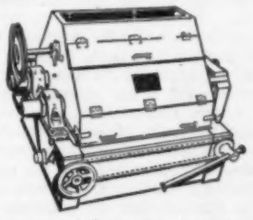
DON'T

face another season without a

KRIMPER-KRACKER Grain Roller!

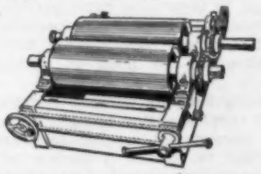
(Reg. U. S. Pat. Office)

Other millers by the hundreds have been reaping a fabulous harvest of new profits since dust-free rolled grains revolutionized the livestock feeding industry.

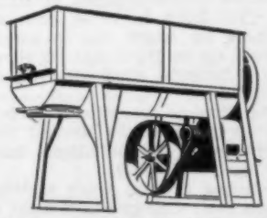


Let us prove how you too can add $10.00 to $30.00 or even more to your hourly profits and run your custom milling department 8 to 10 hours daily with a Krimper-Kracker, available in 15 sizes, single, double, 2 or 3 pairs high. 9" x 6" to 12" x 30".

Yes, and livestock feeders have learned these past 10 years that free-choice, or hit and miss feeding mixing is barn-lot bankruptcy. Their profits are secure when, **and only when,** COMPLETE balanced rations are fed!



A Davis Krimper-Kracker (shown above, cover off) balances rations. This famed Davis-Built Mixer 100% accurately blends chopped hay, ensilage, etc., into rolled or ground grains, with minerals, supplements, pellets, molasses, etc.



The incomparable Davis Ear Corn GRANULATOR obsoleted other methods of processing corn and cobs. Wide-awake millers are going out to the feed lots AFTER the business with Portable Davis Combined Units as shown below.

Batch Mixer . . . KRIMPER-KRACKER . . . GRANULATOR FOR EAR CORN AND HAY, is the complete answer to the "new order of things."

Drop a card to Drawer F.H. 185, Bonner Springs, Kansas, and free literature will be mailed to you without obligation.

DAVIS BUILT HCD SINCE 1894 **H. C. DAVIS SONS'**

Box F. H. 185, Bonner Springs, Kan.

ARKANSAS NUTRITION CONFERENCE

(Continued from page 7)

rice hulls were substituted for an equal quantity of prairie hay in steer wintering rations without significantly reducing rate of gain. (4) Sage grass hay, prairie hay and prairie hay mixed with up to 25% cotton field refuse or rice hulls reproduced satisfactory beef steer calf gains. (5) Ground chicken litter, hydrolyzed feather meal and chicken offal meal have been compared with cottonseed oil meal as protein sources for beef calves. Steers didn't consume offal meal readily and periods of adjustment were necessary, apparently to afford a microfloral adjustment in the rumen.

Rumen Micro-organisms: Dr. Stallcup pointed out four nutrient requirements of rumen micro-organisms: (1) a source of readily available energy — primarily carbohydrates; (2) a source of nitrogen; (3) minerals—major and minor; and (4) unidentified growth or stimulatory factors.

Extensive studies have shown that many protein-rich feeds increase cellulose digestion by rumen bacteria; likewise with urea, ammonia salts and other non-protein substances, the speaker said. Numerous workers have presented evidence regarding the need of rumen bacteria for readily available carbohydrate materials, and in general this work points out that moderate levels of these materials stimulate while high levels suppress cellulose digestion.

Dr. Stallcup reviewed several conclusions found in testing the mineral requirements of ruminants: (1) Iron, cobalt, copper, zinc and manganese stimulated the utilization of non-protein nitrogen by rumen bacteria. (2) Molasses ash, phosphorus and iron stimulate cellulose digestion in the artificial rumen. (3) Alfalfa ash and molasses ash have been found useful in improving poor quality hay rations. (4) Sulfur is especially essential where non-protein nitrogen compounds are used at maximum levels.

Using Surplus Grains: The theory that surplus grains brought about by the government support program be utilized to replace a portion of the more common but less abundant grains in feed formulas was advanced by Dr. K. W. Scott of the Arkansas staff. For example, in three experiments using chicks it was found that up to 30% rice may be substituted for corn and that consistent performance was established at around the 15% level. In swine, corn was replaced by rough rice in varying degrees up to 100% and no significant differences were observed, Dr. Scott said.

The speaker presented a table of relative grain values devised from recent price and nutritional information. See Table 1.

Pelleting Effects: Work at Washington State College has brought out the fact that there are favorable nutritional effects from pelleting feeds, and these responses are due largely to the chemical or other such changes in the feed and not by increasing the density or other physical properties of pellets, Loren V. Burns, Agri-Tech, Inc., Kansas City, said in a talk on pellets and pelleting.

A Canadian group had previously shown that pelleting improved the performance of high barley rations but attributed the improvement to increased feed consumption, Mr. Burns said. Others based the increase on density, while the latest Washingfon State work opens a whole new vista of exploratory work regarding pelleting and may lead to new concepts in pelleting, he surmised.

Pelleting pressures have a marked influence on the chemical reaction of corn to fat, Mr. Burns indicated. Lubricants, surface active agents and binding agents are helpful adjuncts but their action cannot always be predicted, the speaker said. Many different kinds of forces are involved in pelleting—mechanical forces, cohesive and adhesive forces, electrostatic forces, gravitational forces, surface forces and others.

By studying the effect of these forces we have, for example, found out that uniform particle size is not conducive to good pellets but that random particles give a more symmetrical pack. Also, liquids assist in plasticity or process of binding of pellets, Mr. Burns said.

Quality Control: Laboratory facilities are extremely important in any manufacturing process, Maxwell L. Cooley, technical director of the animal nutrition division, Hoffman-Taff, Inc., Springfield, Mo., said in a discussion on quality control. In feed manufacturing, assays and other examination can prevent acceptance of sub-standard ingredients as well as insure the quality of the finished feeds. Microscopy has been introduced into feed quality control programs in order that feed and ingredients can be examined more closely, he said.

Although laboratory control is excellent, the small feed mill usually is unable to afford the establishment and maintenance of the necessary facilities. It seems reasonable, Mr. Cooley said, that a production of at least 40,000-50,000 tons per year would be required to permit the operation of a chemical laboratory by any given company.

In the absence of the laboratory, the speaker listed the following important aspects of a good quality control program: (1) Careful physical examination of ingredients and finished feeds for color, odor, texture and general appearance; (2) purchase of ingredients from reputable suppliers; (3) correct handling and disposal of dust collections and mixer clean-outs, especially where certain drugs are involved, to prevent undesirable contamination of feeds; (4) the maintenance of good inventory and usage records to make sure the correct amounts of ingredients are used in specific batches of feed; and (5) the formulas for each feed should contain calculated overages of nutrients to protect guarantees and nutritional requirements.

Milk Replacers: Milk replacers are used in calf nutrition in order to satisfy the need for more economical feeds for raising dairy replacements and vealers; to provide more nutritionally adequate diets, and to simplify and make more convenient the feeding operation, Dr. F. G. Owen of the University of Arkansas said. In the formulation of a good milk replacer, attention must be given to nutritional adequacy, palatability, laxativity and suspendability as well as costs.

Whole milk or a quality milk replacer of 25-30% protein must be fed during the first two weeks, Dr. Owen said. The replacer usually contains about 20% of milk solids, or dried whey solubles at a 5-10% level. Dried blood meal can also replace some of the milk solids. The remaining half of the diet should be made up of energy feeds such as finely ground corn meal, oat flour, wheat flour, distiller's dried solubles and brewer's grains. Inclusion of fat such as lard or hydrogenated vegetable oils helps control diarrhea and improves growth beyond the caloric values, the speaker said.

Lloyd S. Larson, executive vice president of the Midwest Feed Manufacturers Assn., Kansas City, commended the Arkansas feed industry on its tremendous growth in recent years and urged continued close cooperation between college and industry on problems of management and nutritional advice.

Dr. John T. Caldwell, president of the university, welcomed the group to the meeting which was held in the new animal science building on the Arkansas campus. Henry DeSalvo of the Arkansas State Plant Board, Little Rock, spoke on matters pertinent to feed control in the state. Among the presiding officials were James Dunaway, Thibault Milling Co., Little Rock; Dr. Warren Gifford, head of the department of animal industry and veterinary science at the university; Dr. E. L. Stephenson, chairman of the conference and a member of the staff at the university; and Ted Cameron, Cameron Feed Mills, North Little Rock.

Table 1—Economy of Surplus Grain Utilization

Grain	—Proximate analysis— Prot.	Fat	Ash	Fiber	Therm/ lb.	Energy value comp. to corn %	$ Value comp. to corn energy basis	Cost/ cwt.	Savings cwt.
Corn	8.6	4.0	1.2	2.1	82.0	100.0	3.10	3.10	
Oats	12.0	4.6	4.0	11.0	80.1	97.7	3.02	2.32	+0.70
Barley	12.7	1.9	2.8	5.4	70.5	86.0	2.67	2.32	+0.35
Sorghum	11.3	2.9	1.7	2.2	77.9	95.0	2.94	2.24	+0.70
Rye	12.6	1.7	1.9	2.4	70.5	86.0	2.67	2.31	+0.36
Wheat	13.2	1.9	1.9	2.6	80.0	97.5	3.02	3.55	—0.44
Rice	7.9	1.8	5.2	9.0	65.7	80.0	2.48	1.50	+0.98

WINNER—LeRoy Dameron, Archer Feed salesman from Springfield, Mo., receives a gold-plated, inscribed plaque for outstanding sales achievement during the past year. Presenting the award on the right is Richard Angle, Southwest divisional sales manager for the Archer-Daniels-Midland Co. The award was made at a recent company sales meeting in Kansas City.

Chicago Office Staff Secretary Married

CHICAGO—Miss Edna Maier, for the last six years secretary in the Chicago office of The Miller Publishing Co., was married the evening of Sept. 22 to Thomas R. Dougall. The ceremony took place at St. Paul's Lutheran Church, Melrose Park, Ill., and a reception followed at the VFW Hall in Maywood. Following a three-week honeymoon, Mr. and Mrs. Dougall will return to Chicago Oct. 10, and Mrs. Dougall will return to work the following day.

MARKETS

(Continued from page 2)

in hog prices, also, and it is felt that improved feed sales will accompany this feeling.

Operation schedules were held to recent levels of one or two shifts, but no Saturday production was anticipated at major plants.

Mountain States

Larger feed lots are full or cattle have been bought to fill them, and another three weeks to a month should see all the larger lots full. The smaller feeder for the most part held back buying and now finds feeder cattle a little too high, but there should be enough feeding to make the feed business much healthier than a year ago.

Feed grains are moving in greater quantity the past week, indicating increased activity has begun. The situation looks as though it will continue unless cattle prices grow unfavorable.

Ten drouth area counties in Colorado have taken some toll of the volume, and there also are other counties where the livestock inventory is down.

The turkey feeding program is slowing up considerably as processing has picked up momentum. All-in-all, the feed situation is looking much better than it did a few weeks ago.

Central States

What is described as "a fall pickup" was experienced by some formula feed manufacturers in the central states during the week ending Sept. 26, but the rally has not extended to all segments of the trade. While a few mills have stepped up their operations, others are running on a cutback level.

The increased demand seems to be fairly seasonal in nature, with cattle and hog feeds in the front. Meanwhile, turkey feeds are slipping and dairy feeds are slow.

Prices held on a fairly even keel for the most part, but some ingredient prices were easy. Several traders believe that feed prices are at about their seasonal low, and most changes now, with the possible exception of those on corn, will probably be upward.

Animal proteins advanced in price this week, reflecting a tightening supply situation. One of the major meat packers is struck and this has tightened the market.

Pacific Northwest

The formula feed business continued at a quiet pace, with volume fairly steady. Some increase in dairy feed business was noted as turkey feed volume began to fall off.

The local hay market softened up just a bit due to the fact that some parts of eastern Washington are getting an extra cut of hay due to extremely favorable growing weather, and rains in western Washington are beginning to make pastures soggy. Farmers were still not reaching out for hay supplies, so the extra cutting is pushing the market down at a time when it would normally be firming up.

Soybean meal continues to occupy the center of the stage so far as the proteins are concerned, and buyers are watching this market closely, endeavoring to "pick" the right time. The rest of the protein list was dull. Millfeed continued weak, with sales up to the first of the year having been reported at less than $40 ton, and corn quotations slid off rapidly as old crop positions began to come into line with new crop. Easiness in ingredient markets, together with lack of expanded volume, encouraged the formulators of feeds to sit tight and await developments.

Barley and oats held at about loan levels, but formula feed prices were off a bit due to weakness in other ingredients, and the market was quiet. Over-all volume was off a bit in some cases and holding its own in others, with few reports of expanded operations.

Southeast

Stepped up demand has held in the Southeast during the past week, with prices for most ingredients on the strong side, which has perked up buying interest from feed manufacturers. Dairy feeds are on the upswing, and the movement of citrus pulp has picked up noticeably.

Cottonseed meal has advanced in price due to a holding movement on the part of cottonseed shippers, coupled with stronger markets in the Mississippi Valley. Considerable rain in southern Alabama and southern Georgia this week has also tightened

INDEX OF ADVERTISERS

Abbott Laboratories 55
Agri-Tech, Inc. 3
Alabama Flour Mills .....
Albumina Supply Co., Inc. 19
Allied Chem. & Dye Corp., Nitrogen Division 32
Amburgo Co. .....
American Agricultural Chemical Co. ....
American Cyanamid Co. 46, 47
American Dehydrators Assn. .....
American Elevator & Grain Division .....
American Mill Service Co., Inc. .....
Anderson Box Company .....
Anderson, V. D., Co. 38
Arcady Farms Milling Co. .....
Archer-Daniels-Midland Co. .....
Arkell & Smiths .....
Armour & Co. .....
Aubrey Feed Mills .....

Baker, H. J., & Bro. .....
Barnard & Leas 19
Bartlett, The C. O., & Snow Co. .....
Barton Salt Co., The .....
Bates Grain Co. 40
Baughman Manufacturing Co., Inc. .....
Baxter, A. E., Engineering Co. .....
Bayou Molasses Co. .....
Bemis Bro. Bag Co. 25
Berg, Paul .....
Bigelow Sales Co. 79
Bingman Laboratories, Inc. .....
Black, Sivalls & Bryson, Inc. .....
Blatchford Calf Meal Co. 49
Blomfield-Swanson .....
Borden Company 9
Bosworth Commission Co. .....
Bowman Feed Products, Inc. 10, 51
Bremco Alfalfa Mills, Inc. .....
Brewers Yeast Council, Inc. .....
Brower Manufacturing Co. 24
Bryant Engineering Co. 26, 75
Burlap Council, The .....
Burrows Equipment Co. 79
Butler Chemical Co. 67
Butler Manufacturing Co. .....

Calcium Carbonate Co. 55
California Pellet Mill Co. 44
Canadian Peat Sales Limited 26
Caple, A. B., Co. .....
Capper Publications .....
Cargill, Inc. 44
Champion Portable Mill Co. 15
Chantland Mfg. Co. .....
Chase Bag Co. 45
Checkerboard Elevator Co. .....
Chemical Mfg. Co., Inc., of California.... 73
Chemo Puro Manufacturing Corp. .....
Clofine, Herbert K. .....
Colby Milling, Inc. .....
Columbia Phosphate Co. 10
Columbia Quarry Co. 30
Columbian Steel Tank Co. 33
Commercial Minerals, Inc. 58
Commercial Solvents Corp. 34, 35
Consolidated Blenders, Inc. 79
Continental Grain Co. 79
Continental Steel Corp. .....
Corn Products Refining Co. .....
Coronet Phosphate Co. 52
Coshocton Farmers Exchange Co. .....
Crete Mills 69
Cromwell Paper Co. 21
... C. A., Inc. .....
Daffin Manufacturing Co. .....
Dannen Mills, Inc. 57
Davis, H. C., Sons' 81
Dawe's Laboratories, Inc. 29, 59
Day Company, The .....
Daycom, Inc. .....
Dayton Bag & Burlap Co. .....
Des Moines Oat Products Co. 71
Devold, Peder, Oil Co. .....
Diamond Black Leaf Co. .....
Diamond Huller Co. 12
Diamond V Mills, Inc. 69
Distillation Products Industries 69
Distillers Feed Research Council .....
Doty Technical Laboratories .....
Douglas Chemical Co. ....
Dow Chemical Co. 11
Duplex Mill & Mfg. Co. 41
DuPont de Nemours & Co., E. I.

Early & Daniel Co. .....
Eastman Chemical Products, Inc. 16
Elam Grain Co. .....
Elco Products, Inc. .....
Elk Valley Alfalfa Mills, Inc. .....
Entoleter Division, Safety Industries, Inc...
Eschenheimer, Rudy, Co. 20
Eshelman, John W., & Sons .....
Essmueller Co. .....
Ewing, Ray, Co. 26, 27
Exact Weight Scale Co. .....
Excelsior Milling Co. .....

Fafard, Conrad, Inc. .....
Farm Chemicals Co. .....
Farmer Feeder Co., Inc. .....
Farmers Friend Mineral Co. .....
Feed Associates, Inc. .....
Fischbein, Dave, Co. .....
Flambeau Milling Co. 38
Flavor Corp. of America 56
Food Machinery & Chemical Corp. 19
Food Research Laboratories, Inc. 60
Forster Mfg. Co. 63
Foster & Felter Co., The .....
Fox Co. 59
Freeman, W. H., & Co. 71
Fruen Milling Co. 7
Fulton Bag & Cotton Mills 56

Gabrielson Feeds .....
General Mills, Inc. 42, 43
Godshalk Sheet Metal Fabricators 75
Gorton-Pew Fisheries 80
Grain Elevator Warehouse Co. 78
Grain Processing Corp. .....
Gump, B. F., Co. 58

Hales & Hunter Co. .....
Half Moon Mfg. & Trading Co., Inc. .....
Hallenbeck Inspection & Testing Lab. .....
Hallet & Carey Co. .....
Hand, Peter, Foundation 40
Hardy, H. E., & Co. .....
Hardy Salt Co. .....
Harris-Crane, Inc. .....
Harshaw Chemical Co. .....
Hayes and Stolz 76
Heil Co., The .....
Helm Manufacturing Co. .....
Henderson Mfg. Co. .....
Herring Sales Co. 30
Hess & Clark, Inc. .....
Heterochemical Corporation 14
Heywood & Rabb, Inc. .....
Hiawatha Grain Co. .....
Hilltop Laboratories 31
Hogenson Construction Co. .....
Hogg, N. D., Ltd. .....
Holt Products Co. .....
Homer Mfg. Co., Inc., The .....
Honeggers' & Co. 62
Hot Spot Detector, Inc. 6
Howes, S., Co., Inc. 69
Hubbard Milling Co. .....
Hubbell, Charles H. .....
Hudson Pulp & Paper Corp. .....

Ibberson, T. E., Co. .....
Illinois Soy Products Co. .....
Indian Jute Mills Assn. .....
International Minerals & Chemical Corp. .....
International Paper Co. .....
International Salt Co., Inc. 17
Interstate Mills, Inc. .....
Iowa Limestone Co. .....

J-M Trading Corp. .....
Jacobson Machine Works 10
Jackson, Gilbert, Co., Inc. .....
Jersee Co. 63
Joseph, I. S., Co., Inc. .....

Kansas Farmer .....
Kansas Soya Products Co., Inc. 66
Kasco Mills, Inc. .....
Katz, Max, Bag Co. 31
Kees & Company 19
Kellogg, Spencer, & Sons, Inc. 30
Kent, Percy, Bag Co., Inc. 39
Keystone Steel & Wire Co. .....
Kindstrom-Schmoll Company .....
Koelsch, Charles J., Grain Co. .....
Koppers Co., Inc. .....
Kraft Bag Corp. .....
Kraft Foods Co. 65

Laboratory Construction Co. .....
Laboratory of Vitamin Technology .....
La Budde Feed & Grain Co. 39
Lakeland Engineering Equip. Co. .....
Land O'Lakes Creameries, Inc. .....
Landby Dehydrating Co. 79
Lauhoff Grain Co. .....
Leftwich, J. H., & Co., Inc. 67
Le Gear, Dr. Medicine Co. 18
Leitte, E. H., Co. .....
Lilly, Eli, & Co. 45
Lima Armature Works .....
Limestone Products Corp. of America 14
Loncala Phosphate Co. 32

McCabe Grain Co., Ltd. .....
McMillen Feed Mills .....
Maney Bros. Mill & Elev. Co. 4, 80
Marco Chemical Co. .....
Martenis, C. J., Grain Co. .....
Martin, Theo. W., & Son .....
Mayo Shell Corp. 45
Merchants Chemical Co., Inc. .....
Merck & Co., Inc. .....
Mid-Continent Grain Co. 52
Midland-Western, Inc. .....
Mid-West Business Exchange 74
Midwest Dried Milk Co. .....
Milbrew Co. .....
Miller Manufacturing Co. .....
Miller Publishing Co., The 64, 73
Minneapolis Sewing Machine Co. .....
Minnesota Linseed Oil Co. 36
Minnesota Specialty Co., Inc. .....
Mitchell, Hutchins & Co. 50
Monsanto Chemical Co. .....
Morton Salt Co. .....
Munson Mill Machinery Co. .....
Murphy Products Co. .....
Myers-Sherman Co. 32

Nagel, Herman, Co. 36
Natl. Alfalfa Dehydrating & Mlg. Co. 81
National Cottonseed Products Assn., Inc... 81
National Distillers Products Corp .....
National Molasses Co. 36
National Oats Co. .....
National Renderers Assn. 17
Nellis Feed Co. 33
New Century Co., The .....
New England By-Products Corp. 80
Nichols Poultry Farm, Inc. 66
Nigh, W. H., & Co. 33
Nitrogen Div., Allied Chem. & Dye Corp... 32
Nootbaar, H. V., & Co. .....
Nopco Chemical Co. 48
North Carolina Granite Corp. 62
North East Feed Mill Co. .....
Norwood Manufacturing Co. .....
Nutrena Mills, Inc. 44

Oyster Shell Products Corp. 4

Pabst Brewing Co. .....
Pacific Processing Corp. 13
Paper-Calmenson & Co. 21
Park, Philip R., Inc. 31
Parks, J. P., Co. 7
Parrish, N. K. .....
Parrish & Heimbecker .....
Paxton Processing Co., Inc. 75
Pay Way Feed Mills, Inc. .....
Peavey, F. H., & Co. 20
Pfizer, Chas., & Co., Inc. 22, 23
Piehl's Alfalfa Mill .....
Pittsburgh Plate Glass Co. 55
Pless & Sheahan .....
Pope Testing Laboratory, The 59
Potomac Poultry Food .....
Prater Pulverizer Co. .....
Premier Peat Moss Corp. 41
Publicker Industries Inc. 53

Quaker Oats Co. .....

Ralston Purina Co. 12
Rapids Machinery Co. 50
Raymond Bag Corporation 49
Red River Alfalfa Co. .....
Reisman, H., Corporation 12
Reliance Feed Co. .....
Rhinehart Co. 39, 49, 54
Richardson, James, & Sons 80
Richardson Scale Co. .....
Riley Feed Co. 39
Rion Crush Stone Corp. .....
Rohloff Brothers, Inc. .....
Ross Machine & Mill Supply, Inc. .....
Ryde & Co. .....

St. Regis Paper Co. .....
Salsbury's, Dr., Laboratories .....
Scanlan, Ivan, & Co. .....
Schenley Distillers, Inc. .....
Schreiber Mills, Inc. .....
Schuster-Wise Grain & Feed Co. .....
Schutte Pulverizer Co., Inc. .....
Scroggins Grain Co. 10
Seagram, Joseph E., & Sons, Inc. .....
Security Mills, Inc. .....
Sedberry, J. B., Inc. 51
Seedburo Equipment Co. 14
Shellbuilder Co. 31
Shell Chemical Corp. .....
Sievert, C. W., and Associates 12
Silmo Chemical Corp. 63
Simonsen Mfg. Co. .....
Sinason-Teicher Inter American Grain Corp. 15
Sinclair Chemical Co. .....
Small, The W. J., Co. 4
Smith, Edward E., & Co. .....
Soft Phosphate, Inc. 60
Southern Equipment Company 36
Southern Oyster Shell Mfg. Corp. 16
Southwest Mill Supply Co. 75
Sparks-Waters-Farnen, Inc. .....
Special Products, Inc. .....
Specifide, Inc. 76
Spencer Kellogg & Sons, Inc. 30
Sprout, Waldron & Co., Inc. 20, 28, 67, 72
Stabilized Vitamins, Inc. .....
Staley, A. E., Mfg. Co. .....
Staley Milling Co. 84
Standard Brands, Inc. 54
Stone Mountain Grit Co. .....
Strong-Scott Mfg. Co. 71
Sunset Feed & Grain Co., Inc. .....
Superior Feed Co. .....
Swanson, Carroll, Sales Co. 11, 54
Swift & Co. 37, 52, 61

T. D. F. Company .....
Taber Bushnell Co. .....
Tamms Industries .....
Taste Engineering, Inc. .....
Technical Products, Inc. .....
Thompson Printing Co. .....
Tobias Enterprises 72

Ultra-Life Laboratories, Inc. 60
Union Bag Camp Paper Corp. .....
U. S. Industrial Chemicals Co. 39
Universal Hoist & Mfg. Co. .....
Universal Oil Products Co. .....

Van Camp Laboratories 5
Van Dusen Harrington Co. 20
Verity Mills, Inc. .....
Vitality Mills, Inc. .....
Vitamins, Inc. 24
VitaVax, Inc. .....
Vitron Corporation .....
Vy Lactos Laboratories, Inc. 73

W-W Grinder Corporation 75
Wallace & Tiernan Co. Incorporated .....
Ward Feed Co. .....
Warren-Douglas Chemical Co., Inc. 32
Waterloo Mills Co. .....
Weller, B. I., Co. .....
Wells, Ralph, & Co. 24
Wenger Mixer Mfg. Co. 56
Western Condensing Co. .....
Western Yeast Company .....
White Laboratories, Inc. .....
White Shell Corporation .....
Whitmoyer Laboratories, Inc. 65
Williams Patent Crusher & Pulverizer Co...
Wilson & Co., Inc. .....
Wilson, R. S., Co. 17
Winston Laboratories .....
Winter, N. A., Advertising Agency 15
Wirthmore Feeds .....
Wisconsin Alumni Research Foundation 21, 51
Woodard Foods, Inc. .....
Woodward & Dickerson Inc. 63

Yarder Manufacturing Co. .....
Young, John F., Company .....

Zellers' Laboratories 56

cottonseed moving to oil crushers, and this has helped to increase the price of meal. The heavy rain also is being blamed for the further delay in supplies of ground snap corn in the southern producing sections.

The broiler business continues to hold well, with chick placements still above the corresponding week last year. Southeastern cottonseed hulls at the present time are being shipped to Texas and Oklahoma for feeding in the drouth-stricken areas. The market is firm, and most of the trade feels that prices will work higher. Running time for feed mills seems to be about average, and cold weather is expected to increase demand considerably.

The trucking movement on fruits and vegetables started this week in a limited way, making backhaul bookings of feed ingredients possible, which has partly offset increased prices at the shipping mills. There seems to be a trend developing among southeastern dairymen in using larger tonnages of corn cobs and shucks. This is brought about by very low prices and a relatively large southeastern corn crop for the past two years. Peanut meal is not expected to be available in the section before late 1956 or early 1957, and even then the tonnage is expected to be very light.

Northeast

Consumer replenishing of low supplies and the recent cold snap were regarded as factors behind a pickup in formula feed sales.

Egg mashes and growing feeds carried the bulk of the sales turnover. Broiler feeds are off, and turkey feed demand is beginning to decline because some birds have been killed and sent into storage.

Dairy feed demand hasn't increased too much, but renewed cold weather could put it on the move.

Broilers are still depressed. Buffalo area prices at 19@21¢ lb. topped the market in the east. The New England area was hardest hit in the East at 19¢ or below. Eggs turned unsettled after a period of firmness. Prices were off 1¢ in the Buffalo area and 1@2¢ in the New York area. The trade looks for a further decline in the market.

Prices of ingredients were irregular, with the big new corn and soybean crops exerting an impact on the feed industry.

Corn dropped 5¢, but offerings from the country weren't too generous. Distillers grains were off $1, and brewers grains rose $1. New crop beet pulp was quoted $4@5 below the old crop.

Millfeed sales were fairly steady. Prices were irregular and moved up or down in response to demand. The cold snap aided demand for bran.

Running time of manufacturers averaged 44 hours.

Ohio Valley

Sales of formula feeds continued steady this week in the Ohio Valley, and with a highly favorable weather situation prevailing, manufacturers are looking forward to an upswing in sales volume during the coming month. In fact, the outlook is considered more favorable than during any autumn in recent years.

This week the mercury dropped to new low record temperatures on several days, with sharp frosts reported in many areas throughout the valley. While the frosts did only minor damage to late fall crops, they did kill off pastures to a considerable extent, thus making it necessary for farmers to increase the volume of indoor feedings considerably.

Mills generally are now being operated on a five-day basis, with overtime work at some plants being required. Formula feed prices remained steady this week.

Does Your Feed Supplier Give You

All These Sales Building Advantages?

Then See Why It Pays To

Switch to Staley

New HYBRIDIZED Egg Atoms – ENZYMATED Pig Kisses and the Staley speed-feeding plan – the GUARANTEED Chick Atoms plan–these are only three of the more recent Staley customer-winners. As far back as you can remember, Staley has been out ahead with the *new* feed features, the new sales advantages that bring in *new* customers, and hold them, for Staley Feed Dealers.

In 1957 the pace of Staley sales leadership is going to be hotter and faster than ever. New improvements on tested Staley advantages, new scientific gains are all coming. Outstanding promotions based on these constantly better Staley Feeds will make Staley more than ever the feed brand to tie to. Plan to bring up *your* sales with Staley–now!

Write, NOW, for Details of ALL The Advantages The Staley Feed Franchise Brings You–

staley FEEDS

STALEY MILLING COMPANY
Kansas City & St. Louis

Big Advantage for Dealers with Own Mixing Facilities: ATOMIX

You can sell your own brands, using yours or customers' own local grains, with the Staley ATOMIX Plan. A complete program of feed manufacture, packaging, display, advertising, is already proved and ready to go for you. Inquire!

"Laboratory-Controlled" Feeds using Your Farm Grains...
(NAME) FEEDS
ATOMIX
Here's how you get this double boon, with our ATOMIX-prepared feeds:

No. 1611–56P